

CONNECTING  
TOMORROW'S  
WARRIORS

2014 PORTFOLIO

PEO  C3T

PROGRAM EXECUTIVE OFFICE COMMAND CONTROL COMMUNICATIONS-TACTICAL





## TABLE OF CONTENTS



### A | PM JTN

Joint Tactical Networks (JTN)



### B | JTNC

Joint Tactical Networking Center (JTNC)



### C | PM MC

Command Post Computing Environment (CP CE)

Fire Support Command and Control (FSC2)

Joint Battle Command-Platform (JBC-P)

Mounted Computing Environment (MCE)

Strategic Mission Command (SMC)

Tactical Mission Command (TMC)



### D | PD NET E

Common Hardware Systems (CHS)

Cryptographic Systems

Data Products

Key Management



### E | PM TR

Airborne Maritime Fixed Station (AMF)

Handheld, Manpack, and Small Form Fit (HMS)

Mid-Tier Networking Vehicular Radios (MNVR)

Multifunctional Information Distribution System (MIDS)



### F | PM WIN-T

Area Common User System Modernization (ACUS MOD)

Deployable Ku Band Earth Terminals (DKET)

Disaster Incident Response Emergency Communications Terminal (DIRECT)

Global Broadcast Service (GBS)

Global Rapid Response Information Package (GRRIP)

Phoenix/Super High Frequency (SHF)

Regional Hub Nodes (RHN)

Signal Modification(Sig Mod)

SIPR/NIPR Access Points (SNAP)

Secure, Mobile, Anti-Jam, Reliable, Tactical-Terminal (SMART-T)

Transportable Tactical Command Communications (T2C2)

WIN-T Increment 1

WIN-T Increment 2

WIN-T Increment 3



### G | CUSTOMER FUNDED ORGS

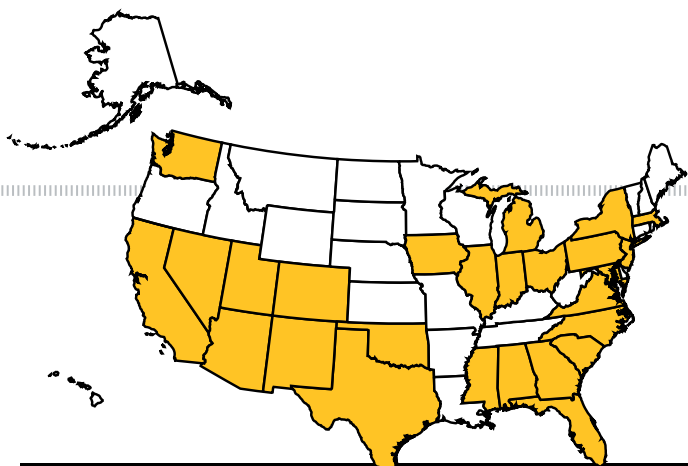
MilTech Solutions

## ACRONYMS



# PEO C3T MISSION

To rapidly develop, field, and support fully networked capability sets. ★ PEO C3T's vision is connecting tomorrow's warriors.



The reach of government and contractors of PEO C3T throughout the United States.



**CONGRESSIONAL LOCATIONS**





Headquartered at Aberdeen Proving Ground, Maryland, the Army's PEO C3T develops, acquires, fields and supports the Army's tactical network, a top modernization priority and critical enabler for an agile, expeditionary Force 2025. The mobile tactical network delivered by PEO C3T provides secure and reliable communications that allow commanders and Soldiers to stay connected and informed at all times, even in the most austere and hostile environments.

Our goal is to deliver a pervasive, integrated network that provides Soldiers the information they need from garrison to the foxhole, while simplifying the network so it is easier to use, train, maintain and sustain. A simplified network will also continue to drive cost savings by combining hardware and other infrastructure, reducing software development efforts and decreasing the field support required to train Soldiers, troubleshoot systems and sustain equipment.

PEO C3T's first priority remains supporting deployed forces. We have seen the power of the network in Afghanistan, where Soldiers have relied on the advanced communications technologies of Capability Set 13 to stay connected, exchange voice, data and video, and execute their advise-and-assist missions in vast, challenging terrain. With terminals ranging in size from carry-on luggage to a small house, our global network of satellite communications (SATCOM) capabilities is providing high-speed, high-capacity network connectivity for enduring

forces in Afghanistan and other regions around the globe.

Over the last decade in support of Operations Enduring Freedom and Iraqi Freedom, the PEO C3T team increased Soldier safety through systems that allow users to view and plot icons on digital maps showing the location of friendly and enemy forces. We brought an unprecedented level of collaboration to commanders who plan operations and experience shared intelligence on a computer screen. We field the satellite communications network on which Soldiers utilize those systems and others, such as those for fires and logistics planning and capabilities that sense, locate and respond to indirect fire.

Now, we are preparing for the future by executing mission command modernization to build a seamless information sharing environment across the tactical battlefield, supporting Force 2025 and Beyond operational priorities for versatility, mobility and interoperability with joint and coalition partners.

The dedicated PEO C3T staff supports more than 40 key acquisition programs and efforts with expertise in the areas of computer science, program management, engineering, information technology, security, logistics, contracting, procurement, accounting and budgeting. At any given moment, you can find us at the Soldier's side, whether in combat training centers and remote locations within the continental United States or around the world.

“

***A globally responsive, regionally engaged Army requires an advanced, mission-tailorable network to enable expeditionary operations.***

**MG Daniel P. Hughes**  
Major General, US Army  
PEO C3T

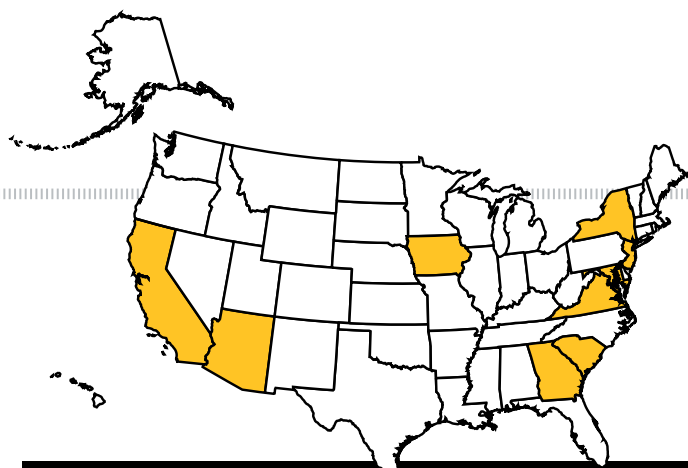
”



# JTN MISSION

tactical warfighting capabilities.

Joint Tactical Networks (JTN) will deliver, maintain, upgrade and improve portable, interoperable, mobile ad hoc networking waveforms and network enterprise services to enhance



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**

- G2 Software Systems
- Booz Allen Hamilton
- Exelis INC, BAE
- Harris Corp
- General Dynamics
- Rockwell Collins

**JTN**  
JOINT TACTICAL NETWORKS



## DESCRIPTION

JTN manages and sustains specified networking and legacy communications waveforms and network manager services for software defined radios. The networking (Soldier Radio Waveform (SRW), Wideband Networking Waveform (WNW), and Mobile User Objective System (MUOS)), legacy (Link-16) waveforms, as well as network enterprise services products (JTRS Enterprise Network Manager (JENM), etc.) are capable of operating in a variety of software defined radios for both Program of Record (PoR) and commercial, non-developmental item (NDI) radios. Common waveforms increases the level of interoperability among tactical networks. JTN employs a competitive contracting strategy to promote the best value for technology and innovative capabilities while addressing threats and achieving future requirements in a more cost effective manner.

## CAPABILITIES

- Joint Software Defined Radio market created using the Software Communications Architecture and Application Program Interfaces
- Common Network Manager for JTRS networking waveforms (WNW, SRW, MUOS)

- Employs open system architecture and Government Purchase Rights (GPR) common software to be used on multiple hardware vendors' products
- Waveforms support wireless networking with the Global Information Grid (GIG) and provide secure, cyber-hardened communications for deployed warfighters at the tactical edge
- Provides single Information Repository configuration management for joint networking applications and waveforms
- Porting/reuse of common interoperable waveforms across various radio platforms



**A** | Soldiers managing an SRW network using JENM software on the Joint Tactical Networking Environment (TNE) NETOPS Toolkit (J-TNT) Laptop

**B** | JTN Product Portfolio











B

Sep-14

Platform



















Army Program Of Record (POR) [8]

Navy POR [2]

	HMS				AMF		GMR	MNVR	MIDS	DMR
	 Riflesman Radio AN/PRC-154	 SFF-B	 SFF-D RT 1948/D	 Manpack AN/PRC-155	 AMF-SALT	 AMF-SANR	 AN/VRC-107	 AN/VRC-118	 AN/USQ-190	 AN/USC-61
Nr Channels	1	2	1	2	2	2	2/3/4	2	4	
WNW				WNW		WNW	WNW	WNW		
SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW		
MUOS				MUOS						MUOS
SINGARS		SINC		SINC		SINC	SINC	SINC		SINC
UHF SATCOM/DAMA				DAMA			DAMA			DAMA
HF							HF			HF
JENM	●	●	●	●	○	○	●	●	○	○

JTN Product Portfolio

Non-Developmental Initiative (NDI) [21 and growing]

GO		BAE		Mariti		Exelis		Raytheon		MGC		BCI		Hughes		Thales		Vulcan		USC 6001
 TBD	 SRW Application	 Phoenix	 AN/PRC-117G	 AN/PRC-152 J152A	 RF 300-E	 SRW Application	 SRL/STT (no Visual)	 SRL/STT (no Visual)	 AN/PRC-233	 Freedom 150/155	 AN/USC-210 Gen5	 TBD	 AN/PRC-148	 AN/PRC-148B	 SRW Application	 CIS 50E	 USC 6001			
2	1	2/4	1	1/3	1	1	2	1	1	2/2	1	1	1	2	1	1	1	1	1	4
WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW
SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW
MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS	MUOS
SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC	SINC
			DAMA							DAMA										
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

ACQ PHASE

1. Technology Development
2. Engineering & Manufacturing Development

3. Production & Deployment
4. Operations & Support



# JTNC MISSION

To ensure interoperable, secure and affordable waveform and wireless communications by recommending standards, conducting compliance and certification assessments in accordance with DoD policies, and maintaining a DoD Waveform Information Repository (IR).



- G2 Software Systems
- Booz Allen Hamilton



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

The Joint Tactical Networking Center (JTNC) is responsible for (1) Establishment of a jointly funded common Waveform Information Repository (IR); (2) Evolution of the Software Communications Architecture, Application Program Interfaces, and wireless communications standards; (3) Conducting technical assessments of waveforms, software and associated artifacts and recommending designation of such products as compliant or certified with regard to Department of Defense (DoD) applicable policies; and (4) Providing technical inputs to the JTNC Board of Directors (BoD).

## CAPABILITIES

The Joint Tactical Networking Center provides coordinated wireless communications expert technical support to USD(AT&L) and DoD CIO-related policy initiatives and governance processes aimed at ensuring interoperable, secure and affordable waveform and wireless communications. To achieve its vision and execute its mission, the JTNC is organized into three functional entities: DoD Waveform Information Repository; Standards and Compliance; and Certification Assessments. At the heart of the JTNC are the enduring, core functions as defined in the JTNC Charter:

**Technical advisor to JTNC Board of Directors (BoD)**

## DoD Waveform Standards and Software Communications Architecture

- Provides a validated open architecture framework that separates waveform/network manager from the radio set
- Permits common waveforms and network managers to be deployed across multiple radio sets and vendors

## DoD Waveform IR Management & Configuration Control

- Provides a cyber-hardened, DoD-wide waveform library and controlled access for waveforms and associated network managers, operating environment software, models, architectural standards and Application Program Interfaces (APIs)
- Protects and distributes artifacts based on legal agreements between government and software developers

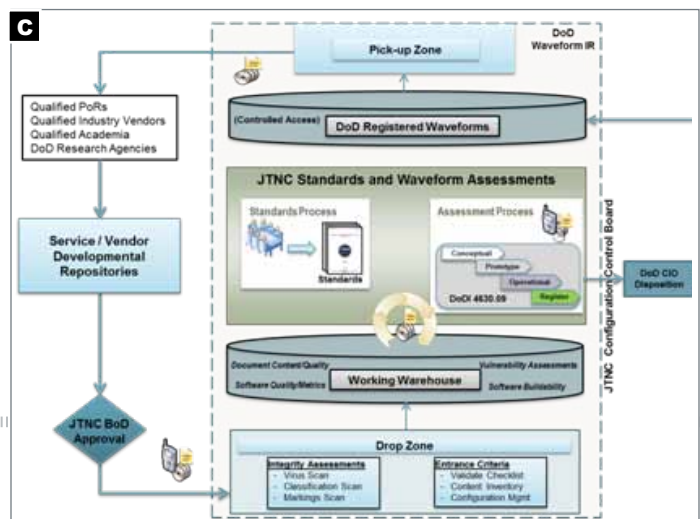
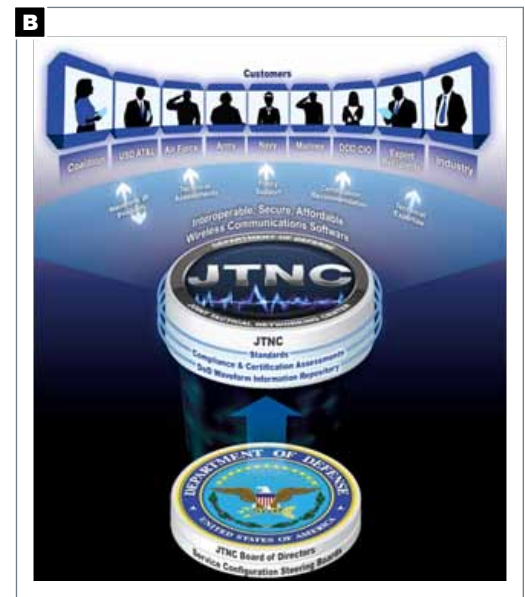
## Technical assessments of DoD Waveform IR products

- Compliance: preliminary characterizations regarding meeting government standards for interoperability and security. Assessments facilitate preparation for participation in Service-level test events
- Certification: comprehensive characterization of Waveform IR products as to whether they meet DoD standards and policies for interoperable and secure joint tactical networking

**A** | Soldier on radio for future systems

**B** | The mission command graphic depicts the JTNC's customers, services and functions, and identifies the governance and stakeholder relationships that enable mission execution.

**C** | The JTNC End to End Process provides an enterprise view of how JTNC performs the task of assessing a waveform in a DoD CIO Stage Review.



✱ Tri-Service Funded Organization

**ACQ PHASE\***

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

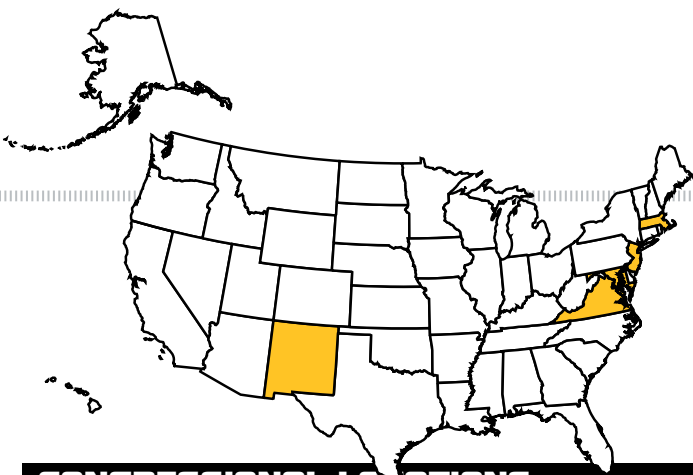
3

4



# CP CE MISSION

The Command Post Computing Environment (CP CE) is a common, scalable, integrated Mission Command architecture and infrastructure (hardware, services, applications) aligned with the Common Operating Environment (COE) that will produce improved interoperability, reduced costs and reduced development and deployment timelines.



**CONGRESSIONAL LOCATIONS**

- ESP
- CSC
- Future Skies
- General Dynamics
- ManTech
- Strategic Business Solutions, Inc.

**KEY CONTRACTORS**





## DESCRIPTION

The Army has approved a set of computing technologies and standards called the COE, enabling secure, interoperable and rapid application development across several defined computing environments.

The CP CE, one of several computing environments under the Army's COE, is comprised of a partnership between multiple Project Managers with the goal to simplify hardware and software infrastructures for Command Posts from Battalion to Corps and Army level. CP CE will consolidate and simplify the separate capabilities commanders use for missions related to fires, logistics, intelligence, airspace management and maneuver into a single computing environment. This effort will provide the commander with a consolidated readiness picture on a singular workstation, lessen the logistics trail for the Warfighter, reduce the training burden and save taxpayer dollars.

The CP CE will enable the Army to develop and field applications or "apps" through a web-based marketplace for use by tactical and operational commanders. Using any government-authorized laptop connected to the appropriate classified network, commanders and staff can log into the web-based

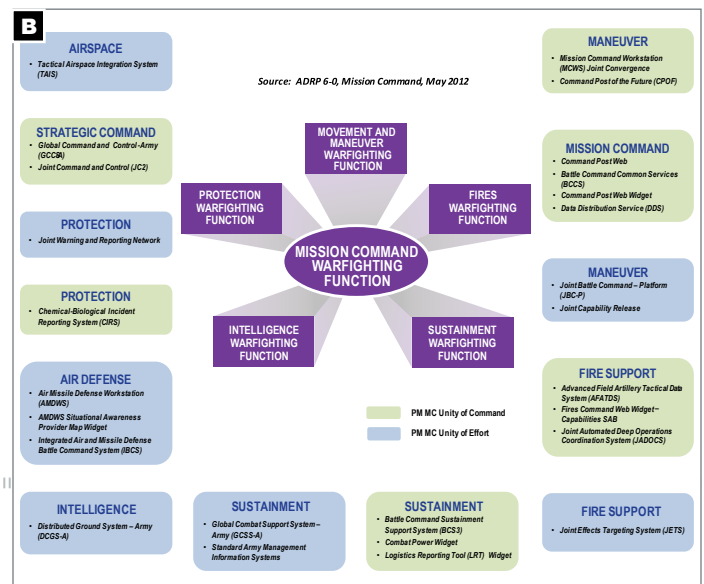
framework, called the Ozone widget framework, to access these apps. The apps provide the commander with three-dimensional views on a digitized map for operational and intelligence awareness for ground and air reporting, field artillery commands, logistics, alerts and incident reporting.

This commonality will enable the commander not only to achieve a more complete and unified common operational picture on a single screen, but also to trace information back to its source to facilitate situational understanding and decision-making. CP CE will meet the commanders' needs for collaborative planning and decentralized execution across all warfighting functions, enhancing their ability to make rapid adjustments according to the combat situation and act decisively to achieve their mission.



**A** | A Soldier monitors converged warfighting function data on a digital map. The CP CE will allow additional data consolidation and simplification of situational awareness information related to fires, logistics, intelligence, airspace management and maneuver through a single computing environment.

**B** | The CP CE enables commanders to adopt the Mission Command philosophy of balancing the art of command and science of control by alleviating the requirement to mentally fuse multiple warfighting data sources displayed on multiple viewers.



✱ Non-Program of Record

**ACQ PHASE\***

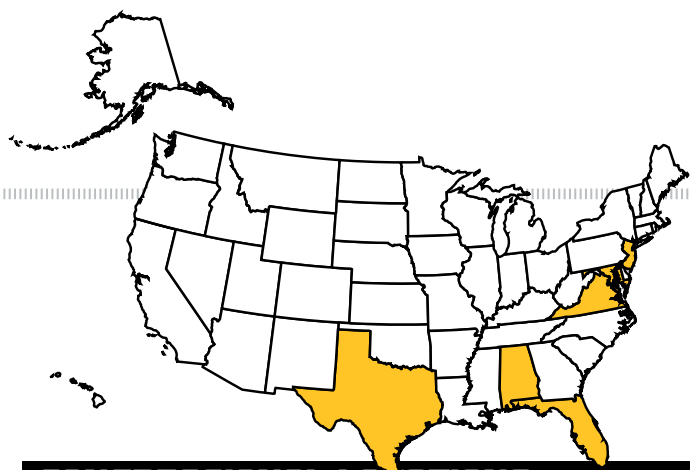
1. Technology Development
2. Engineering & Manufacturing Development

3. Production & Deployment
4. Operations & Support



# JBC-P MISSION

Joint Battle Command - Platform provides leaders and Soldiers with the mission command and situational awareness capabilities that bring mobile mission command and situational awareness capabilities to brigade and below for the Army, Marine Corps and Special Operations Forces.



**CONGRESSIONAL LOCATIONS**

- Software Engineering Directorate, (AMRDEC)
- CACI
- DRS Technology
- ESP
- MITRE

**KEY CONTRACTORS**





## DESCRIPTION

JBC-P is the Army's next generation friendly force tracking system, equipping Soldiers with a faster satellite network, secure data encryption and advanced logistics. JBC-P includes an intuitive interface with features like touch-to-zoom maps and drag-and-drop icons. A handheld version of JBC-P will run on the Nett Warrior handheld device overseen by PEO Soldier, delivering situational awareness capabilities to dismounted Soldiers. JBC-P incorporates the common hardware solution known as the Mounted Family of Computer Systems (MFOCS), introducing standardized tactical computers that are scalable and tailorable to the mission and vehicle. Ranging in options from a detachable tablet to a fully-loaded, vehicle-mounted workstation, MFOCS runs not only JBC-P but can also run other software applications, reducing size, weight and power demands. JBC-P builds on the situational awareness capability known as Force XXI Battle Command Brigade and Below/Blue Force Tracking (FBCB2/BFT), which is integrated on more than 120,000 platforms and is fielded or authorized to every brigade combat team in the Army.

## CAPABILITIES

- Increased accuracy and density of situational awareness (SA) to further mitigate risk of fratricide.
- Dismounted forces integrated into digital common operational picture (domain most at risk of fratricide).
- Tactical Ground Reporting (TIGR) disseminates tactical information on disadvantaged networks across multiple Army echelons and systems, and can be used in almost any environment to show historical data of occurrences in distinct locations.
- TIGR provides Areas, Structures, Capabilities, Organizations, People, and Events (ASCOPE) data for mapping the human terrain that allows commanders to plan, anticipate and mitigate operational risk.
- Orders, graphical overlays, friendly, hostile, neutral, unknown, non-combatant SA.
- Free Draw, Free Text, Chat and combat messages.
- Sensor integration to enable capability to pinpoint location.
- Hybrid network.
- Improved user interface.
- Electronic Casualty Report (ECR).
- Improved route planning.



**A** | A Soldier uses JBC-P to send messages and increase situational awareness.

**B** | Full featured capabilities enable Warfighter efficiency.

**C** | Soldiers will be able to operate the Army's primary situational awareness capability, JBC-P, as well as other command, control, communications, computers, intelligence, surveillance and reconnaissance applications.



# ACQ PHASE

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

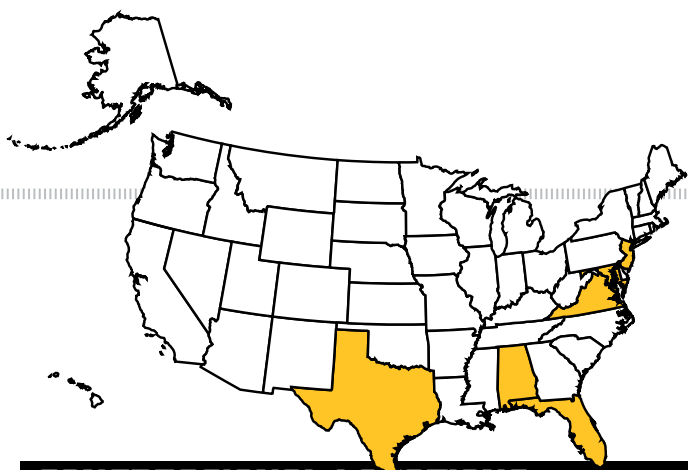
3

4



# MCE MISSION

The Mounted Computing Environment (MCE) provides a common set of applications and services as part of the Army's Common Operating Environment (COE) to enable mission command on ground and airborne platforms. Using JBC-P as the core of MCE and its associated Software Development Kit (SDK), MCE will enable the rapid convergence of current software systems and the agile development and certification of new on-the-move capabilities.



## CONGRESSIONAL LOCATIONS

- CACI
- DRS Tactical
- ESP
- General Dynamics
- MITRE

## KEY CONTRACTORS





## DESCRIPTION

One of six Computing Environments that make up the Army-wide Common Operating Environment (COE), Mounted Computing Environment (MCE) embraces a commercially-based set of standards that enable secure and interoperable applications to be rapidly developed and delivered. To extend the connection to the dismounted Soldier, the MCE is beginning to deliver tactical capabilities through a standard framework that allows government and industry partners to build to a well known environment – Android. Known as the Mounted Android Computing Environment (MACE), this strategy keeps today's tech-savvy Soldier in mind, while addressing the need for greater technological simplicity and interoperability across the force.

## CAPABILITIES

- Provides operating systems, common applications, software development kits and standards to implement mission command.
- Leverages Joint Capabilities Release and Joint Battle Command-Platform/Blue Force Tracking for situational awareness.
- Establishes secure applications that are interoperable with

existing mission command (MC) systems, and allows seamless information exchange across all echelons for a complete situational awareness picture down to the tactical edge.

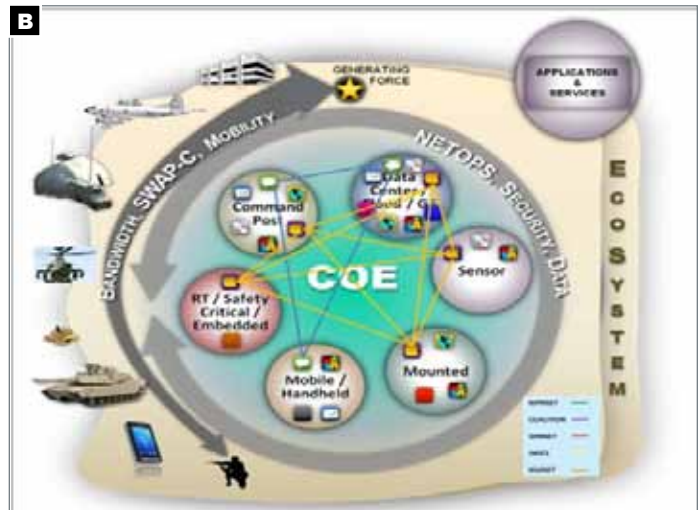
- Enables mission command on-the-move by providing an environment for an integrated suite of platform-based MC applications and services.
- Eliminates redundant hardware, streamlines product development and consolidates capabilities.
- Optimized for use on the Mounted Family of Computer Systems (MFoCS).
  - MFoCS is delivered in Basic, Intermediate, and Advanced variants to provide tailored computing capabilities to the warfighter.
  - Provides standard interfaces to meet the Vehicle Integration for C4ISR/EW Interoperability (VICTORY) technical specifications.
  - MFoCS is managed by the JBC-P Program Office



**A** | JBC-P serves as the core of the MCE

**B** | MCE is one of the six Computing Environments within the Common Operating Environment

**C** | MCE establishes a common foundation for computer software on mounted platforms.



✱ Non-Program of Record

**ACQ PHASE\***

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

3

4



# FSC2 MISSION

Fire Support Command and Control (FSC2) empowers commanders to plan and execute the delivery of lethal and non-lethal fires by providing capabilities to visualize fires, situational awareness and increase collaboration among fires staff.



**CONGRESSIONAL LOCATIONS**

- General Dynamics
- Raytheon
- Northrop Grumman
- ESP
- CSC
- Chenega Technology Services Corp.

**KEY CONTRACTORS**





## DESCRIPTION

FSC2 provides the U.S. Army, Joint and Coalition commanders with the capability to plan, execute and deliver both lethal and non-lethal fires. Many FSC2 capabilities are transitioning to web-based apps that can be accessed via a secure internet as part of the Army's Command Post Computing Environment (CP CE). The CP CE is consolidating and simplifying the separate capabilities commanders use for missions related to all of the warfighting functions and will provide the commander with a consolidated readiness picture on a singular workstation, lessen the logistics trail for the Soldier, reduce the training burden and save taxpayer dollars.

## CAPABILITIES

- Advanced Field Artillery Tactical Data System (AFATDS) provides fully automated support for planning, coordinating, controlling and executing fires and effects such as mortars, field artillery cannons, rockets and missiles, close air support, attack aviation and naval surface fire support systems.
- Joint Automated Deep Operations Coordination System (JADOCS) is a Joint and Coalition warfighting Windows-based software suite that provides integration and synergy between multiple Joint and Coalition forces for real-time targeting and fires coordination.
- Pocket-Sized Forward Entry Device (PFED) is used by forward observers and fire support teams to transmit and receive fire support messages over standard military line of sight, High Frequency and Satellite Communications radios.
- Lightweight Forward Entry Device (LFED) hardware hosts the Forward Observer System (FOS) software, which enables mounted forward observers and fire support officers to plan, control and execute fire support operations at maneuver platoon, company, battalion and brigade levels.
- CENTAUR is the lightweight tactical fire direction system that serves as a technical fire direction capability. Its primary function is a secondary technical calculation check for AFATDS or manual calculations.
- Gun Display Unit-Replacement (GDU-R) digitally receives firing commands from the Fire Direction Center, which are then forwarded down to the crews of non-digitized howitzers.

**A** | Soldier using AFATDS

**B** | Soldier using a PFED

**C** | Soldier from the 1st Battalion, 321st Airborne Field Artillery Regiment, 18th Fires Brigade (Airborne), receiving firing data on a GDU-R before firing a M119A1 Howitzer



# ACQ PHASE

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

3

4



# SMC MISSION

Strategic Mission Command (SMC) provides critical automated command and control tools for Joint Task Force (JTF) Commanders and staff through Combatant Commands.



- Banc3
- Lockheed Martin
- ESP
- Oracle Corp.



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

SMC provides interoperable hardware and software solutions to the Army, Joint and coalition partner communities. SMC's visionary work with cloud technologies to field the Battle Command Common Server (BCCS) led to the organization's role as liaison between PM MC and the Army's Common Operating Environment (COE) effort. The COE is an approved set of computing technologies that will allow government and industry partners to develop secure and interoperable applications across several computing environments, including the Command Post Computing Environment (CP CE), thus drastically reducing the time it normally takes to field applications to Soldiers.

## CAPABILITIES

- BCCS is an architecture designed for scalability both from a hardware and baseline software architecture perspective, and can be adopted to support various tactical unit standard operating procedures, processes and integration needs.
- Global Command and Control System-Army (GCCS-A) is the Army's strategic and theater Command and Control (C2) system. It fulfills the need for critical automated command and control tools for Army Combatant

Commanders to enhance the Soldier's capabilities throughout the spectrum of conflict during Joint and combined operations.

- Common Software focuses on design and development of software that provides communication services to the Soldier, Army systems, and joint and coalition forces.
- Multilateral Interoperability Programme (MIP) is an interface/gateway/common language definition that facilitates the automatic exchange/translation of Common Operational Picture (COP) digital information between C2 systems of two or more nations.
- The Defense Readiness Reporting System – Army (DRRS-A) is a secure, centralized, web-enabled set of enterprise capabilities that report mission-critical unit readiness; manage unit mobilization, deployment, and employment execution; and maintain registration of units.
- Tactical Edge Data Solutions (TEDS) Joint Capability Technology Demonstration (JCTD) implements the C2 Core data exchange model for tactical information at the Battalion level. It ensures web-services data sharing based on the federal standard Universal Core (UCore) framework that is capable of data sharing among disparate systems.



**A** | Soldier using GCCS-A

**B** | A Soldier with the 3rd Brigade Combat Team/1st Cavalry Division, Fort Hood, Texas, updates the BCCS.



✱ Non-Program of Record

# ACQ PHASE✱

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

3

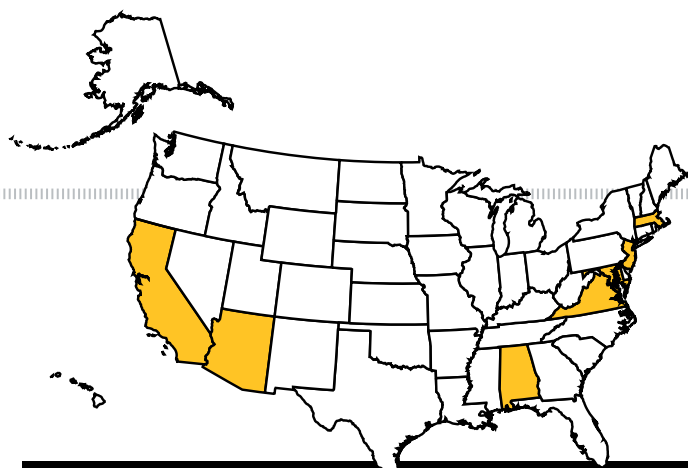
4



# TMC

## MISSION

Tactical Mission Command (TMC) develops, integrates, fields, and supports the Army's core mission command collaborative environment and maneuver applications to enable operating force commanders to make timely and effective decisions. Tactical Mission Command will provide enduring capabilities in support of the Army's vision for a Command Post Computing Environment under the Common Operating Environment (COE).



- AASKI
- CACI
- ESP
- Future Skies
- General Dynamics
- ManTech
- SEC
- SED
- WSEC



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

TMC is a suite of products and services that provide commanders and staffs executive decision making in a collaborative environment, planning tools, common operational picture management, information and knowledge management, and other maneuver functional tools. Many TMC capabilities are transitioning to web-based widgets that can be accessed via a secure internet as part of the Army's Command Post Computing Environment (CP CE). The CP CE is consolidating and simplifying the separate capabilities commanders use for missions related to all of the warfighting functions and will provide the commander with a consolidated readiness picture on a singular workstation, lessen the logistics trail for the Soldier, reduce the training burden and save taxpayer dollars.

## CAPABILITIES

- Command Web provides modular software widgets served up over the web. Improved supportability and ease of use in robust network environments.
- Command Post of the Future (CPOF) is the commander's situational awareness and decision support tool for company and above. Integrates data feeds from other Army,

Joint, and Coalition systems into an operating picture that is tailorable by users to meet their particular needs.

- Common Tactical Vision (CTV) is an intuitive touch screen situational awareness viewer with digital video recorder (DVR) playback capabilities that provides Common Operational Picture (COP) data.
- Battle Command Sustainment Support System (BCS3) provides supply visibility, logistics reporting, convoy tracking and alert reporting capabilities; includes the Logistics Reporting Tool (LRT), In-transit Visibility (ITV), Asset Visibility (AV) and Log View web-apps.
- Battle Command Sustainment Support System - Node-Management (BCS3-NM) provides web-based distribution management that integrates joint ITV and AV data sources focused on supply storage and distribution nodes.



**A** | Soldier using Command Post of the Future (CPOF)

**B** | TMC systems inside a Command Post



# ACQ PHASE

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

3

4



# CHS

# MISSION

Common Hardware Systems (CHS) provides state-of-the-art computer and networking equipment for the Soldier that improves connectivity, interoperability, logistics and worldwide repair, maintenance and logistics support to Soldiers utilizing C4ISR Systems for the Joint Warfighter and other Army requirements and is available for use by all DoD and Federal Agencies.



- JANUS Research
- Engineering Solution
- Booz Allen Hamilton



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

CHS provides hardware in four versions: V1 – non-ruggedized, V1+ – Some ruggedization, V2 – ruggedized and V3 – near military specification (MIL SPEC). A five-year warranty is provided for all hardware and covers the items for defects in material, workmanship and “fair wear and tear.” Warranty repairs or replacements are accomplished within a 72-hour turn-around-time at worldwide CHS Regional Support Centers. The program also provides a Technical Assistance and Support Services (TASS) provision, which includes: field exercise support, reset and deep clean, integration of computer and networking hardware into systems, “out of warranty repairs” (including other than fair wear and tear) and support for the materiel fielding of assembled systems.

## CAPABILITIES

- Process Improvements: Analysis and reengineering of CHS processes including technical insertions (adding hardware onto contract) and hardware delivery orders resulted in 50% reduction in contract action turnaround time.
- Hardware Evaluations: Support to Common Operating Environment (COE) and selection of common hardware chassis for Command Post Computing Environment (CP CE) client workstation.
- Configuration Management.
- Flexible and customizable sustainment options.
- Web-Based Customer Interface: Allows CHS customers to initiate hardware orders and generate reports.

**A** | Various products and components offered by CHS  
**B** | Soldiers setting up CHS equipment within a Tactical Operation Center (TOC)



# ACQ PHASE

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

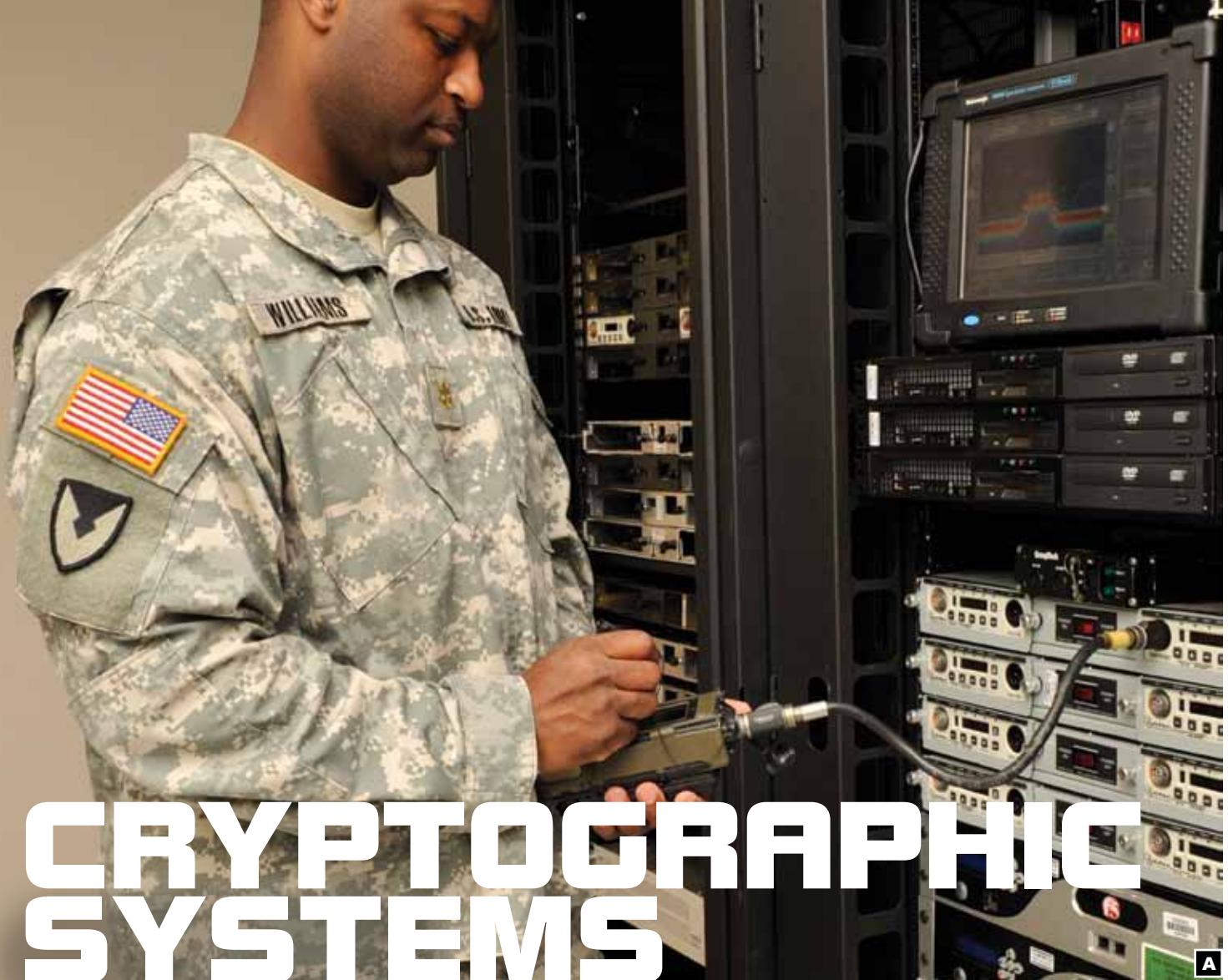
4. Operations & Support

1

2

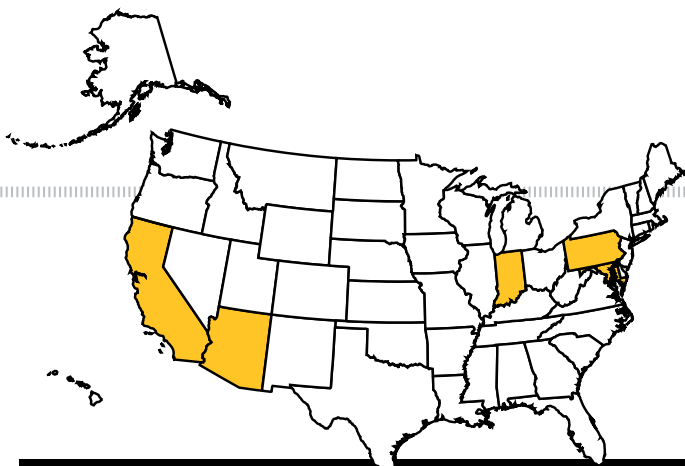
3

4



# CRYPTOGRAPHIC SYSTEMS MISSION

Cryptographic Systems procures, tests and fields Communication Security (COMSEC) solutions to secure the Nation's Information Infrastructure against all cyber threats; increase the Soldier's survivability and lethality on the battlefield; and enable Mission Command activities.



- L3
- General Dynamics
- VIA SAT
- Raytheon
- CACI



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

The COMSEC Cryptographic Systems Program procures, tests and fields COMSEC solutions to secure the National Network Enterprise. New and emerging architectures, cease key dates and DoD/Army policy are driving the need to replace the current inventory of stovepiped systems with technologically advanced (network centric/GIG compliant) devices that incorporate Chairman of the Joint Chiefs of Staff and Joint Requirements Oversight Council directed cryptographic standardization, advanced key management and network centric performance capabilities. This enables the Army to equip the force with critical crypto solutions and services during peacetime, wartime and contingency operations.

## CAPABILITIES

- In-Line Network Encryptors Family - Encryption systems that provide the secure data and voice communications capability over Internet Protocol (IP) networks.
- Link/Trunk Encryptors Family - Communication systems that multiplex and encrypt multiple signals into secure wideband data streams that are transmitted over fiber, cable and satellites.
- Secure Voice Family - Systems that provide secure voice communication capability through the use of security tokens and/or public key encryption.
- In-Line Media Encryptors Family - Systems that provide secure data encryption capabilities for data at rest.



**A** | Soldier using Cryptographic Systems

**B** | Examples of the INE Family of Cryptographic Systems

**C** | Examples of the ECC Family of Cryptographic Systems

**D** | Examples of the LEF Family of Cryptographic Systems



✱ Non-Program of Record

# ACQ PHASE\*

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

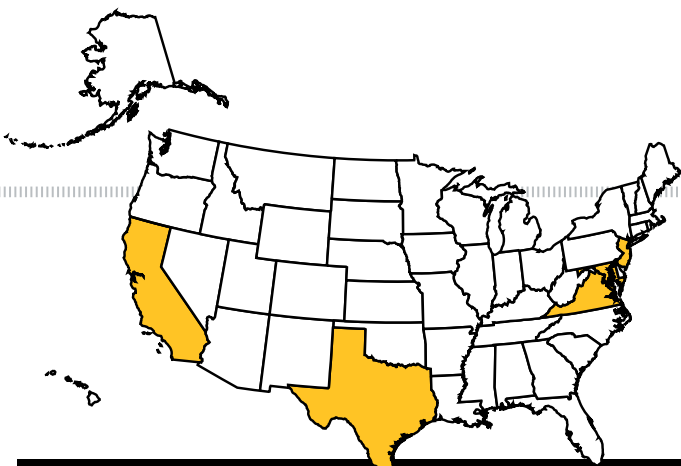
4. Operations & Support



# DATA PRODUCTS

## MISSION

Produce Data Products, which are a collection of mission data required to initialize Warfighter Information Network – Tactical (WIN-T), Mission Command, Joint Battle Command-Platform (JBC-P), Standard Army Management Information System (STAMIS), Distributed Common Ground System - Army (DCGS-A) and other Army Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems that support all Warfighter mission areas.



- Northrop Grumman
- CACI
- CSC
- SAIC
- General Dynamics



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**

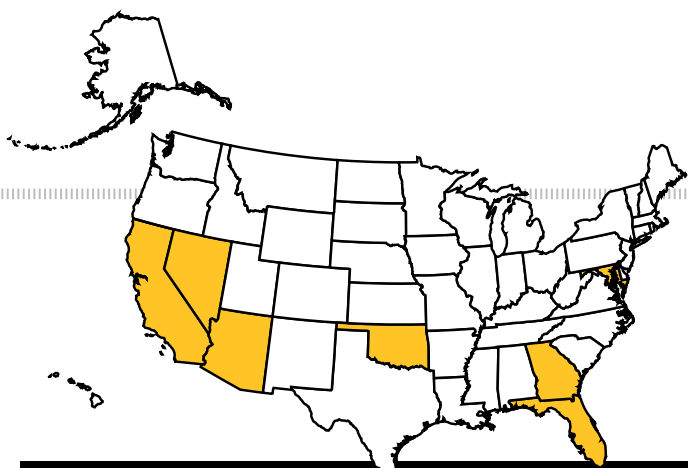






# KEY MANAGEMENT MISSION

Key Management automates the functions of Communications Security (COMSEC) key management, control, and distribution; Electronic Protection generation and distribution; Signal Operating Instruction (SOI) management and Spectrum Management. Army Key Management. System (AKMS) provides planners and operators with the capability to deliver secure communications at both the theater/tactical and strategic/sustaining base levels.



- CACI
- CSS
- Sierra Nevada Corp
- Northrop Grumman



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

AKMS consists of 3 subcomponents: Local COMSEC Management Software (LCMS), Automated Communications Engineering Software (ACES) and Simple Key Loader (SKL). Under the umbrella of the National Security Agency (NSA), Electronic Key Management System (EKMS), AKMS provides tactical units and sustaining bases with an organic key generation capability and an efficient, secure electronic key distribution means. AKMS provides a system for distribution of COMSEC, electronic protection and SOI information from the planning level to the point of use in support of current, interim and objective force at division and brigade levels.

## CAPABILITIES

- LCMS: Automates COMSEC management/accounting; electronically generates/distributes keys; and reduces hardcopy files use.
- ACES: Provides Crypto network planning; generates SOI data/creates COMSEC key tags; supports emerging requirements.

- SKL: Loads keys into End Crypto Units (ECUs); small and ruggedized design allows easy key transfers; interface between LCMS/ ACES/ ECUs.
- JTNT: Provides a joint tactical end-to-end NETOPS planning, configuring, monitoring and management toolset for communications systems, which includes those systems that report geographic/ geospatial position via K5.01 JVMF Position-Location Information (PLI).



**A** | Soldiers programming a Simple Key Loader to allow their radios to communicate securely between vehicles

**B** | JTNT NetOPS training

**C** | Key Management components



# ACQ PHASE

1. Technology Development

2. Engineering & Manufacturing Development

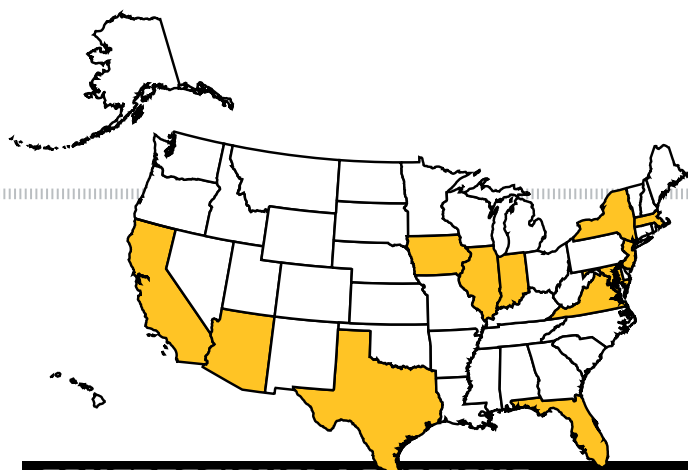
3. Production & Deployment

4. Operations & Support



# AMF MISSION

Airborne, Maritime, Fixed Station (AMF) will provide Army Aviation platforms the ability to link with and expand integrated tactical networks. AMF ensures Army Aviators' ability to communicate both horizontally and vertically via voice and data within all mission areas and in all combat operational environments.



- Booz Allen Hamilton
- CSC
- Mitre
- SRA



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

The Airborne, Maritime, Fixed Station (AMF) radios are software programmable, multi-band, multi-mode, mobile ad hoc networking radios, providing simultaneous voice, data, and video communications. The radios will support the Common Operating Picture (COP), Situational Awareness (SA), and interoperability of Mission Command (MC) systems throughout the battlefield. AMF must ensure the Soldier's ability to communicate both horizontally and vertically via voice and data within all mission areas. AMF radios will help close capability gaps by extending data networking to company and below echelons, enabling network services to the platform and connecting Army aviation platforms to Army ground and Joint air network domains. Per Milestone Decision Authority (MDA) direction, the redefined AMF Program will procure radios as Non-Developmental Items (NDI).

## CAPABILITIES

- Meets Size, Weight and Power (SWaP) restrictions for Army rotary wing platforms.
- SANR (Small Airborne Networking Radio) will provide a multi-channel networking radio capable of using Soldier Radio Waveform (SRW) and Wideband Networking Waveform (WNW) in addition to legacy Single Channel Ground and Airborne Radio System (SINCGARS) capability to interoperate with ground forces for seamless connectivity for combat operations.
- SANR will provide support to all Army rotary wing platforms, as well as the Gray Eagle Unmanned Aircraft System (UAS).
- The Small Airborne Link 16 Terminal (SALT) will provide a two-channel networking radio capable of using Soldier Radio Waveform (SRW) and Link 16.

- A** | AMF ensures air-to-ground and air-to-air interoperability for Army Aviation Platforms
- B** | AMF NDI Operational Concept



# ACQ PHASE

1. Technology Development
2. Engineering & Manufacturing Development

3. Production & Deployment
4. Operations & Support

1

2

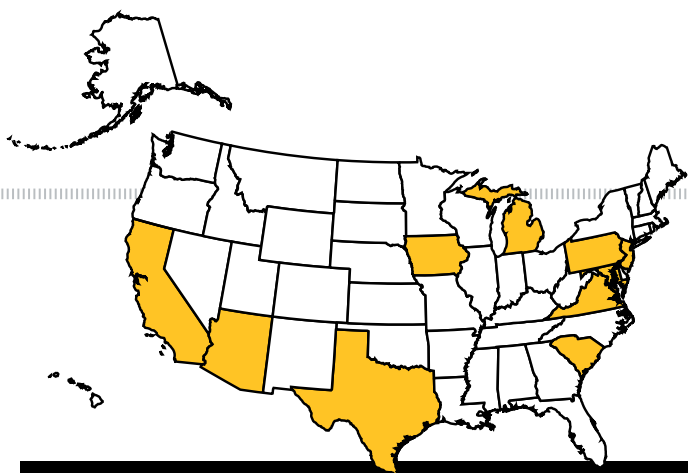
3

4



# HMS MISSION

Handheld, Manpack and Small-form Fit (HMS) develops and produces affordable networking tactical radio systems that meet the requirements of the Army, Marine Corps, Navy, Air Force and Special Operations Command (SOCOM) and are interoperable with specified radios in the current forces.



- GDC4S
- Booze Allen Hamilton
- Janus Research





## DESCRIPTION

Handheld, Manpack and Small-form Fit (HMS) is a family of networking tactical radio systems that are interoperable with specified radios in the current forces. HMS provides Joint interoperable connectivity to the tactical edge/most disadvantaged Warfighter with an on-the-move, at-the-halt, and stationary Line of Sight (LOS)/Beyond Line of Sight (BLOS) capability for both dismounted personnel and platforms. The radios are scalable and modular Software Communications Architecture (SCA) compliant, enable net-centric operations, operate multi-band and multi-mode, and deliver reliable, secure tactical communications.

- AN/PRC-154 Rifleman Radio (RR) (1 Channel Type 2): SRW
- AN/PRC-154A Nett Warrior Radio (Secret and Below)
- AN/PRC-155 Manpack (MP) (2 Channel Type 1): SRW, SINCGARS, UHF SATCOM, Mobile User Objective System (MUOS) scheduled for inclusion after December 2015.
- Small Form Fit: SRW and various legacy WF mixes

## CAPABILITIES

- Simultaneous Voice, Data and Video Communications.
- Increased Throughput Using Networking Waveforms.
- Increment 1 Interoperable with currently fielded radios operating with Single Channel Ground and Airborne (SINCGARS), Ultra High Frequency (UHF) Satellite Communications (SATCOM), as well as new radios using Soldier Radio Waveform (SRW) and MUOS for Capability Set 15.
- Voice and Data Route and Retransmission.
- Multi-Channel capable (Manpack).

**A** | Radio Rifleman and Manpack

**B** | AN/PRC-154

**C** | AN/PRC-154A

**D** | AN/PRC-155

**E** | SFF-D

**F** | Small Form Factor – Bravo (SFF-B)



# ACQ PHASE

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

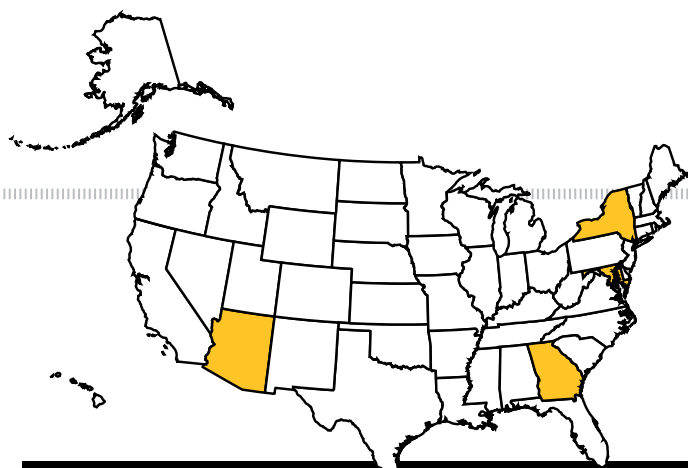
3

4



# MNVR MISSION

The Mid-tier Networking Vehicular Radios (MNVR) will provide, through a modified Non-Developmental Item (NDI) acquisition process, multi-channel tactical platform radios, which host Joint Tactical Networking Center (JTNC) networking waveforms, addressing the Army's requirement for Mid-Tier Wideband Networking (MWN) capability.



- Harris Radios Corporation
- Booz Allen Hamilton
- Janus Research



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

The MNVR system provides an extension of data services from the upper tactical network at brigade and battalion to the lower tactical network at company and platoon echelons. The advanced network waveforms provide rapid distribution of data and imagery with increased information assurance protection and automatic routing across complex terrain. The MNVR capability consists of modular radios capable of running software-defined waveforms, which operate as nodes in a network to ensure secure wireless communication and networking services for mobile and stationary forces. This supports Mission Command, sensor-to-shooter, sustainment and survivability applications through the full range of military operations on tactical platforms.

## CAPABILITIES

- MNVR can operate new Internet Protocol (IP) based networking waveforms offering increased data throughput through self-forming, self-healing and managed communication networks.
- Dynamic, scalable, on-the-move (OTM) network architecture, connecting the Soldier to the mission command network and enhances capability to exchange voice and data simultaneously and faster than current systems.
- Advanced network waveforms provide rapid distribution of data and imagery with increased information assurance protection and automatic routing across complex terrain.



**A** | MNVR is planned for integration with current and future vehicle platforms such as Strykers, Mine-Resistant Ambush Protected (MRAP) vehicles, High Mobility Multipurpose Wheeled Vehicles (HMMWVs) and Bradley Fighting Vehicles (pictured).

**B** | The Army has conducted a successful initial demonstration of its MNVR radio system at NIE 14.2.



✱ Pre MS C

**ACQ PHASE\***

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

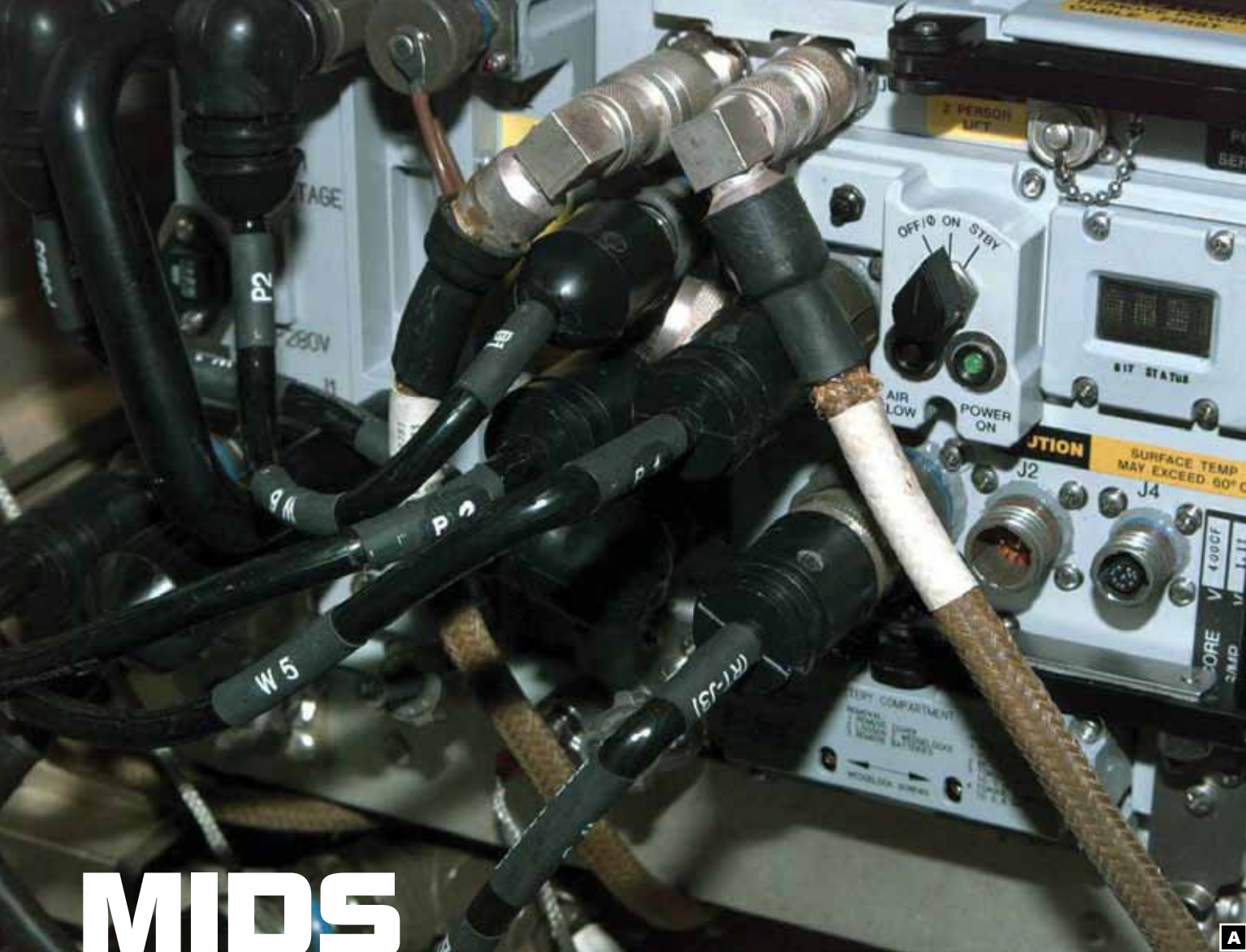
4. Operations & Support

1

2

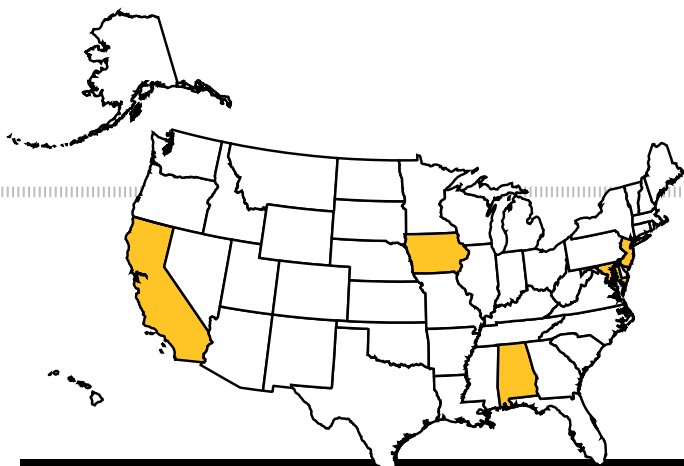
3

4



# MIDS MISSION

Multifunction Information Distribution System Low Volume Terminal 2 (MIDS LVT2/11) terminals provide tactical data link (Link-16) connectivity integrating communication, navigation and identification capabilities in support of airborne, land-based and maritime tactical operations. The United States Army MIDS system primarily supports air defense platforms such as the Phased Array Tracking Radar to Intercept on Target (PATRIOT), Air Defense and Airspace Management (ADAM) Cell, Forward Area Air Defense Command and Control (FAAD C2), Terminal High-Altitude Area Defense (THAAD) and Joint Tactical Ground Station (JTACS).



- DLS LLC
- VIA SAT



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

MIDS (Link-16) is DoD's primary tactical data link. It provides multiservice/NATO interoperability, and situational awareness, and supports air and missile defense engagement operations at Division through Corps.

## CAPABILITIES

- Near Real Time Distribution of Air & Missile Tracks.
- Nets Air Defense Control Centers.
- Control Air/Missile Defense Operations.
- More affordable Link-16 terminal vice JTIDS terminal.



**A** | Close-up of a MIDS

**B** | MIDS-LVT(2/11)

**C** | An engineer installs the MIDS during a test



✱ Non-Program of Record

# ACQ PHASE\*

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

3

4



# ACUS MOD MISSION

Area Common User System Modernization (ACUS MOD) provides planned network upgrades through technology insertions into the current force to support the Army's current WIN-T Increment 1 force modernization efforts. It includes increased network services and management, information assurance, enhanced reach-back and increased transport speed and bandwidth required to support the Soldier's increasing need for high-speed data, voice, video and imagery through the recapitalization of current force systems.



- General Dynamics
- CACI
- Engineering Solutions & Products



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

ACUS MOD supports network upgrades for the Army's modernization of its current WIN-T Increment 1 force. It provides Internet network management capabilities, as well as integrated voice, video and data services. It also allows for beyond-line-of-sight (BLOS) transmission capability. It provides increased situational awareness to unit commanders, improved throughput and joint and coalition interoperability at battalion and above. It also implements commercial-based technology insertions into the current force for smooth technology upgrades.

## CAPABILITIES

- The Single Shelter Switch (SSS), designed for rapid deployment and small footprint, provides "first in" capability and is the building block for network expansion. The SSS provides communication officer (S6) functionality in a single vehicle shelter.
- The High Capacity Line Of Sight (HCLOS) radio, an integral part of WIN-T Increment 1, replaces the existing AN/GRC-226 radios in the AN/TRC-190 LOS family. The HCLOS radio upgrade provides improved data rates required to transport the increased volume of data on the digital battlefield.

- Battlefield Video Teleconference (BVTC) provides the commander with access to accurate, timely situational information and is interoperable with the existing communication Local Area Network (LAN) infrastructure across a multi platform backbone network. The BVTC will also assist the commander in coordinating and interacting with different echelons and adjacent units.
- The TROPO Radio, AN/TRC-170(V)3 provides BLOS communications, reduces SATCOM demands and offers an alternative long haul communications method. It provides greater distance and bandwidth than the LOS terminals found in tactical theater signal battalions.
- Tactical Network Operations (NetOps) Management System (TNMS) is a scalable, modular NetOps capability that operates on multiple client or server platforms. The TNMS will facilitate decision-making necessary to quickly identify network problems, shift resources, change configurations and coordinate the management of the critical network infrastructure supporting mission command functions.



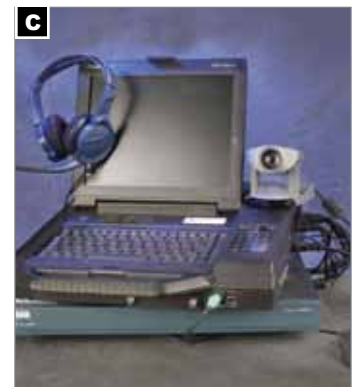
**A** | The TROPO Radio, AN/TRC-170(V)3 provides beyond-line-of-sight (BLOS) communications, reduces SATCOM demands, and offers an alternative long haul communications method. It provides greater distance and bandwidth than the LOS terminals found in tactical theater signal battalions.

**B** | High Capacity Line of Sight (HCLOS) radio

**C** | Battlefield Video-Teleconferencing Center (BVTC)

**D** | Single Shelter Switch (SSS)

**E** | Tactical Network Operation Management System (TNMS)



✱ Non-Program of Record

# ACQ PHASE\*

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

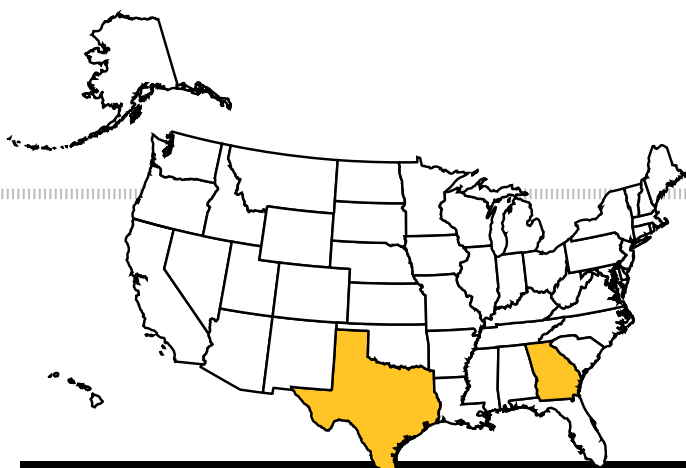
4. Operations & Support



# DKET MISSION

Deployable Ku band Earth Terminals (DKETs) are used at brigade and higher deployed headquarters elements to augment the tactical communications network infrastructure.

Some of the DKETs take on dual roles as a hub providing inter- and intra- theater satellite links at brigade and higher and linking multiple regional command headquarters. The DKET reduces the traffic load on Regional Hub Nodes and provides hub services for disadvantaged forward operating bases.



- Datapath
- General Dynamics



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

DKETs are satellite terminals designed for use at larger hub locations. They support commercial Ku-band frequencies, and have been certified for Ka and X band capability to take advantage of U.S. military satellites. They are highly transportable and self-contained, and can establish headquarters-level, network-hub connectivity anywhere a mission demands.

## CAPABILITIES

- DKETs are currently deployed in three configurations: Light (3.7 – 3.9M), Mobile (4.5M) and Standard (4.6M – 7M), with the majority being the light design. This lighter design has a tri-fold antenna and a smaller shelter to make redeployment and setup faster and easier.
- The robust DKET network makes for a seamless transition to backup equipment or terminals, eliminates long outages and minimizes impact to the Soldier.
- DKETs operate on Ku, Ka and X-band frequencies.
- Electronics are housed in separate shelters.



- A** | DKETs support commercial Ku-Band frequencies and their electronics are housed in separate shelters. They are highly transportable, self-contained and can establish headquarters-level, network-hub connectivity anywhere a mission demands.
- B** | A DKET is shown in March 2011 as part of Project Manager Warfighter Information Network-Tactical's Ka and X-band frequency certification effort that enables earth satellite terminals to utilize military satellites.



✱ Non-Program of Record

**ACQ PHASE\***

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

**1**

**2**

**3**

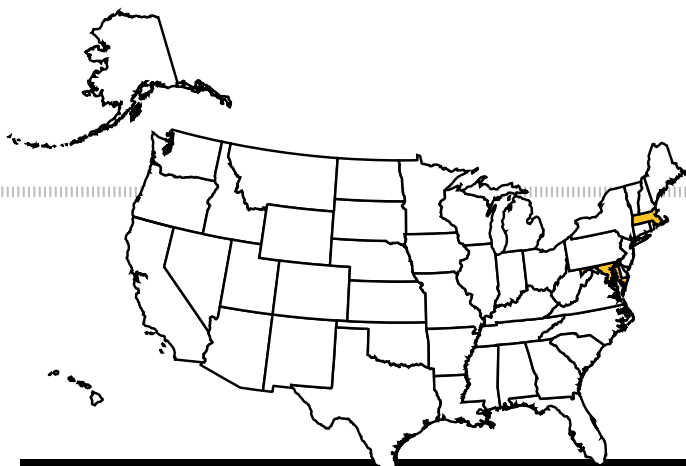
**4**

Army National Guard Photo by Sgt. Joseph K. VonNida



# DIRECT MISSION

The new Disaster Incident Response Emergency Communications Terminal (DIRECT), formerly called the Joint Incident Site Communication Capability (JISCC), provides interoperable communications support to National Guard response forces and local first responders in support of civil missions and domestic emergencies. It provides collaboration and communication services at incident sites that link local responders and emergency managers with state and federal authorities.



- Janus Research
- Engineering Solutions & Products



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

Domestic emergencies happen quickly and often without warning. The DIRECT advanced communications system can rapidly deploy anywhere in the U.S. to enable vital interagency communications. It provides critical communications capabilities to numerous National Guard missions that include large-scale pre-planned events, responses to man-made and natural disasters and other civil support and humanitarian efforts. The system includes a modular communications system, support equipment and a team of trained DIRECT operators and maintainers that can provide global communications within an hour to help save human life and material property. DIRECT will provide commercial internet and phone accessibility, 4G/wireless and radio bridging and voice cross-banding, enabling first responders to seamlessly communicate with each other.

## CAPABILITIES

- The Satellite Transportable Terminal (STT) is highly transportable and mobile satellite system that operates in conjunction with the JNN and is designed to establish secure voice, video and data communications virtually anytime and anywhere.
- A new 4G LTE Cellular/Wireless transmission infrastructure capability will support Soldier cellular handheld requirements from the command post to the edge of the tactical formation.
- The Mission Network Enclave (MNE) provides tactical access to commercial internet and commercial telephone services to facilitate coalition and civil support. An integrated radio-bridging and voice cross-banding module allows interconnection between telephones, combat net radios, first responders' radios and voice applications supporting both civil and military operations. It enables seamless interoperability among disparate radio networks without supplying common radios to these users.
- The DIRECT package also includes a towed generator, towed equipment trailer with communications equipment, tent and support supplies.



**A** | People and their pets evacuated by high clearance Army truck in Boulder County.

**B** | A Joint Network Node (left) provides high-speed network capability as part of the DIRECT package.

**C** | The 4G LTE Cellular/Wireless transmission antenna

**D** | The DIRECT package also includes a Satellite Transportable Terminal (left), a towed-generator (right), towed equipment trailer with communications equipment, tent and support supplies.

**E** | Radio-bridging and voice cross-banding capability enables Soldiers to fuse radio and phone networks.



✱Non-Program of Record

# ACQ PHASE\*

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

3

4



# GBS

## MISSION

Global Broadcast Service (GBS) provides high-speed broadcast of large-volume information products such as video, imagery, maps and weather data to deployed Tactical Operations Centers and garrisoned forces worldwide. GBS provides critical situational awareness, decreases decision times and increases combat agility.



- General Dynamics
- Engineering Solutions & Products
- CSC
- Northrop Grumman
- VIA SAT



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**

## DESCRIPTION

GBS provides high-speed, one way flow of multimegabit video and data products including National Television Standards Committee video, large data files, map files and web products. GBS operates as a system of broadcast sites with multiple receive suite types.

## CAPABILITIES

- Operates on the UHF Follow-On Ka band satellites and the Wideband Global SATCOM Satellite system, augmented as required by commercial Ku band satellites.
- Transportable Ground Receive Suites allow deployed forces to directly receive national level data and full motion video and distribute to tactical operations center local area network users.
- Theater Injection Point provides the Combatant Command/ Combined Joint Force Command an in-theater uplink capability that broadcasts live Unmanned Aerial Vehicle and other video feeds as well as data products generated in theater.
- Transitioning to joint internet protocol modem will provide transmission security capability.



**A** | Soldier on GBS

**B** | Transportable Ground Receive Suites (TGRS)

**C** | GBS



✱ Non-Program of Record

# ACQ PHASE\*

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

3

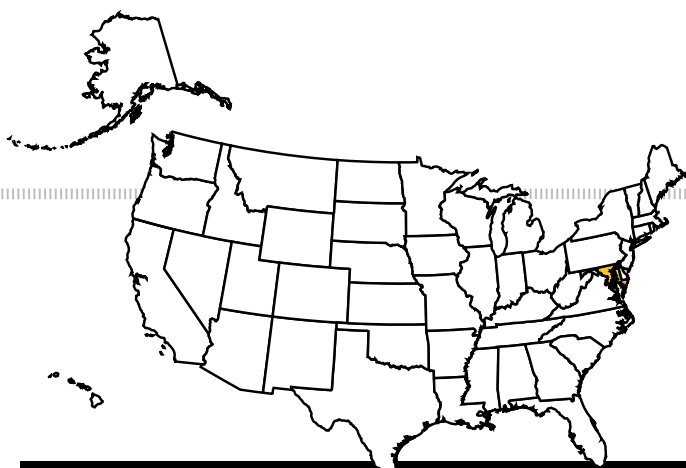
4





# GRRIP MISSION

Fitting into a single handheld transit case for rapid mobility, this satellite network communications kit known as the Global Rapid Response Information Package (GRRIP) provides secure, beyond-line-of-sight voice, video and data communications without the need for local network infrastructure so Soldiers can communicate anytime and anywhere on the planet.



• KLAS Telecom Services



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**

## DESCRIPTION

The GRRIP is small enough to fit in the overhead bin of a commercial airplane and provides network communications and access to mission command applications, as well as supporting calls-for-fire and Medevac requests. It provides classified and unclassified communications to forces operating in austere and demanding environments, such as embedded training teams and other small units that do not have access to the network equipment and infrastructure of established forward operating bases. This commercial-off-the-shelf terminal is designed for small teams entering locations where the infrastructure has been dismantled, destroyed or is non-existent. The GRRIP is also an excellent system for use by first responders.

- Can be configured for use on Secure Internet Protocol Router Network (SIPR) Non-secure Internet Protocol Router (NIPR) or coalition networks.



**A** | GRRIP enables the Soldier or first responder to communicate anywhere in the world by using SIPR/NIPR or coalition voice and data capability without electricity or an existing infrastructure.

**B** | GRRIPs provide secure and non-secure communications to forces operating in austere and demanding environments such as embedded training teams and other small units that do not have access to the network equipment and infrastructure of established forward operating bases.

## CAPABILITIES

- Network communications from anywhere on the planet.
- Fits into a single handheld transit case for rapid mobility and force scalability.
- Continued communications and situational awareness at the tactical edge.



✱Non-Program of Record

# ACQ PHASE\*

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

3

4





# PHOENIX MISSION

Phoenix/Super High Frequency (SHF) terminal provides Expeditionary Signal Battalions (ESBs) with high capacity, inter- and intra-theater range extension for networked mission command information to include logistical, operational, intelligence and administrative data.



- L3 Communications
- JANUS Research
- Booz Allen Hamilton



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

Phoenix/SHF terminal is a transportable, quad-band, tactical satellite terminal that operates in the SHF band over military and commercial satellites. Phoenix/SHF terminal is mounted on an expanded capacity vehicle and provides ESBs assured access to satellite communications and operational flexibility in a tactical environment through a rapidly deployable capability operating over military X/Ka and commercial C/Ku satellite bands. It is designed to operate 24 hours per day, seven days per week and provides assured and reliable communications throughout the world.

## CAPABILITIES

- Operates in military X and Ka band and commercial C and Ku bands.
- Qualified for the military environment: temperature, shock, vibration.
- High-capacity, inter- and intra-theater data range extension over commercial and military satellites.
- Can interface with other strategic networks via Standardized Tactical Entry Points or strategic assets.
- Transmits one FrequencyDivision Multiple Access (FDMA) link and receives up to four FDMA links simultaneously.
- Supports point to point, mesh and hug-spoke networks.



**A** | The Phoenix operates in a world-wide military tactical environment and provides baseband satellite communication signals

**B** | Phoenix at Network Integration Evaluation 14.1 at Fort Bliss, Texas in November 2013.



## ACQ PHASE

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

3

4



# SMART-T MISSION

Secure, Mobile, Anti-Jam, Reliable, Tactical - Terminal (SMART-T) makes it possible for units to extend the range of their network in such a manner that communications cannot be jammed, detected or intercepted; sending text, data, voice and video communications beyond their area of operations without worrying that the information will fall into the hands of enemy forces.



- Raytheon
- MIT Lincoln Lab.
- Booz Allen Hamilton



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

SMART-T provides tactical commanders with secure, survivable, anti-jam, satellite communications in a High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) configuration. Soldiers can use the system to communicate at Extremely High Frequency (EHF) and process data and voice communications at both low and medium EHF data rates. SMART-Ts are being modified to communicate over Advanced EHF (AEHF) satellite, which significantly increases data rates for future tactical communications networks.

SMART-T is the Army's protected satellite communications system that enables commanders at brigade and higher to continue communications operations immediately following an electro-magnetic pulse event.

## CAPABILITIES

- Interoperable with AEHF satellite constellation.
- Enhanced system interfaces
- Provides Low and Medium Data Rate (LDR/MDR) capability for voice and data transmission.
- Interoperable with Milstar, UHF Follow-On, EHF MIL-STD 1582D and MIL-STD 188-136 compatible payloads.
- Provides Anti-Jam and anti-scintillation (nuclear environment) communications.

**A** | Soldiers train on SMART-T at the SMART-T centralized training and fielding facility, in Largo, Fla.

**B** | Signal soldiers in Korea used secure, mobile, anti-jam, reliable, tactical terminal (SMART-T) equipment.



## ACQ PHASE

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

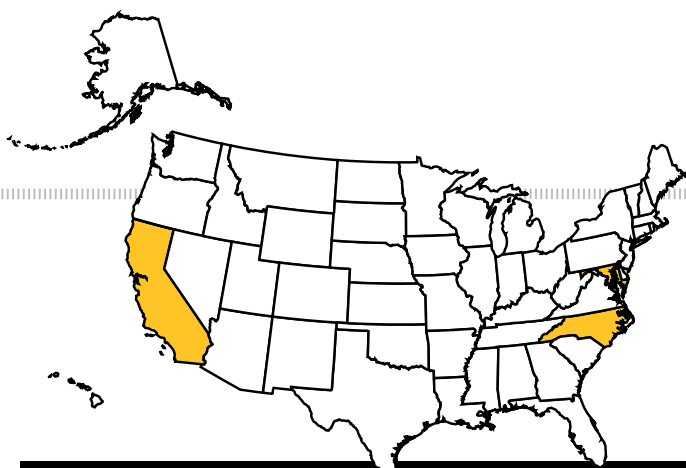
3

4



# BHN MISSION

Regional Hub Nodes (RHNs) are transport nodes for Warfighter Information Network-Tactical (WIN-T). Strategically located at five Department of Defense Standardized Tactical Entry Point (STEP) locations globally, they enable the Army's ability to project forces anywhere in the world in support of contingency operations, disaster relief, or National emergency response.



- GDC4 systems
- ITT



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

RHNs use satellite communications capabilities to enable regionalized reach-back to the Army's global voice and data network. The RHNs operate "in sanctuary," or out of the fight zone, and were designed to provide early access to the Global Information Grid (GIG) for initial entry forces as well as a theater point of entry to the GIG for Army units assigned to any particular region. RHNs give the Soldier in the field immediate access to secure and non-secure internet and voice communications anywhere in the globe. To provide tactical users with secure, reliable connectivity worldwide, the Army has positioned RHNs in five separate strategic regions: Continental United States (CONUS) East and CONUS West, Central Command, European Command and Pacific Command.

## CAPABILITIES

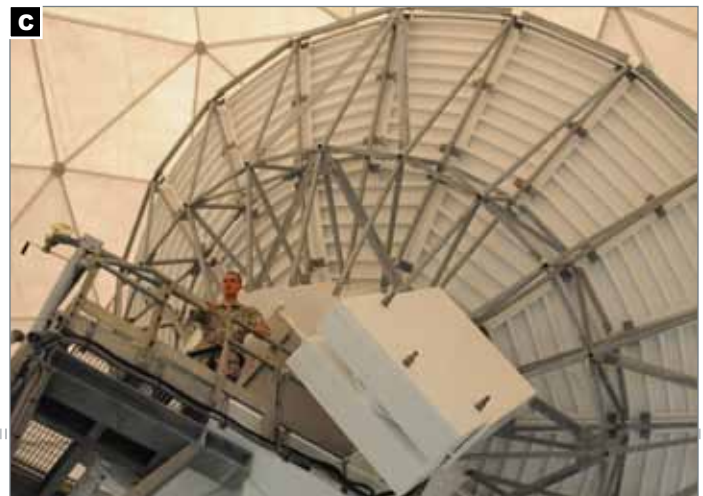
- Currently used by deployed Marine Corps and Army units.
- Uses both commercial and military satellite bands, and is "plug and play" to accept additional military transmissions systems.
- "Customizable:" containing spare racks to support unit equipment specific to their mission set.
- Contains full Network Operations capabilities for network monitoring, management and trends analysis, as well as information assurance tools.



**A** | The extensive satellite communications capabilities of RHNs enable regionalized reach-back to the Army's global network.

**B** | RHN used for exercise with the 82nd Airborne Division, Fort Bragg.

**C** | A 58th Signal Battalion Soldier prepares to perform maintenance on the 9.2 Meter antenna located in Guam.



✱Non-Program of Record

# ACQ PHASE\*

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

3

4



# SNAP MISSION

Secure Internet Protocol Router Network/Non-secure Internet Protocol Router (SIPR/NIPR) Access Point (SNAP) ground satellite terminals are fielded to augment current network capabilities to extend network access to company and team level. Project Manager Warfighter Information Network-Tactical (PM WIN-T) is bridging gaps in C4ISR created by rugged-expansive terrain and sparse infrastructure by deploying these transportable commercial-off-the-shelf Very Small Aperture Terminal (VSAT) satellite terminals, which can deploy more quickly than their larger traditional counterparts.



- Telecommunications Systems Inc



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

SNAPs are designed to provide satellite communications to small units at remote forward operating bases where they are unable to use terrestrial radios due to issues with terrain or distance. These SNAP terminals provide reliable satellite communication access and take advantage of commercial equipment to expedite the fielding process. They provide access to the tactical and strategic networks for mission command, calls for fire, Medevac and information exchange. SNAPs are a key communications component for units, providing secure beyond-line-of-sight communications at the company level and below.

## CAPABILITIES

- Work in concert with WIN-T Increments 1 and 2.
- Transit case design enables easy transport in the back of High Mobility Multipurpose Wheeled Vehicles or helicopters.
- Modular design allows for varying dish and antenna sizes to appropriately satisfy mission requirements.
- Easy to move around the battlefield, providing an expeditionary element to the force.
- Certified Ka and X-band capability to take advantage of the Department of Defense's Wideband Global SATCOM satellites.



**A** | SNAPs enable units in austere environments to pull down SIPR/NIPR-centric services and communicate with higher headquarters

**B** | SNAPs are designed for use at the company echelon and small combat outposts.



✱Non-Program of Record

# ACQ PHASE\*

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

3

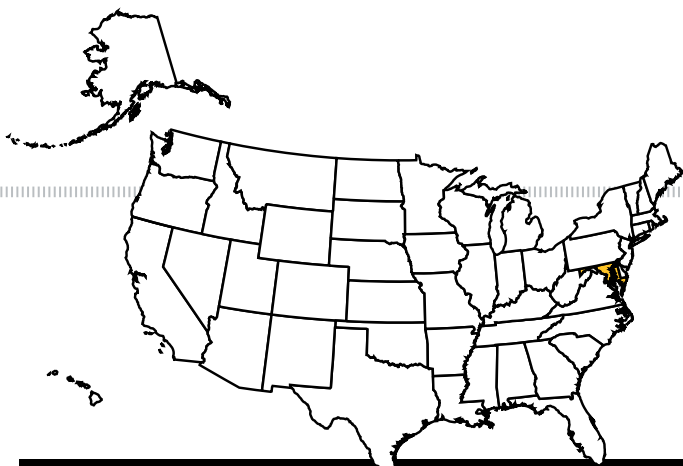
4



# SIG MOD MISSION

The Signal Modernization (Sig Mod) program aims to increase the expeditionary nature of today's forces and the ability to deploy the right size units to right place at the right time.

Sig Mod will provide expanded network transport capacity to WIN-T Increment 1 and Increment 2 while reducing the tactical signal support footprint and strategic lift requirements for operational brigades, divisions, corps and expeditionary signal battalions (ESBs). It increases the agility, scalability and the expeditionary nature of units.



• Janus Research



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

Sig Mod will transform and augment the Army's communication capabilities and extend the network to lower echelons via modular, scalable and interoperable nodes. Operational requirements have pushed the need for communication capabilities lower in Army formations. The new network enhancements will provide significant increases in throughput and situational awareness, further untether commanders from the command post and enable a more rapidly deployable force by reducing size, weight and power (SWaP). The Sig Mod program provides continued communications to the tactical edge.

## CAPABILITIES

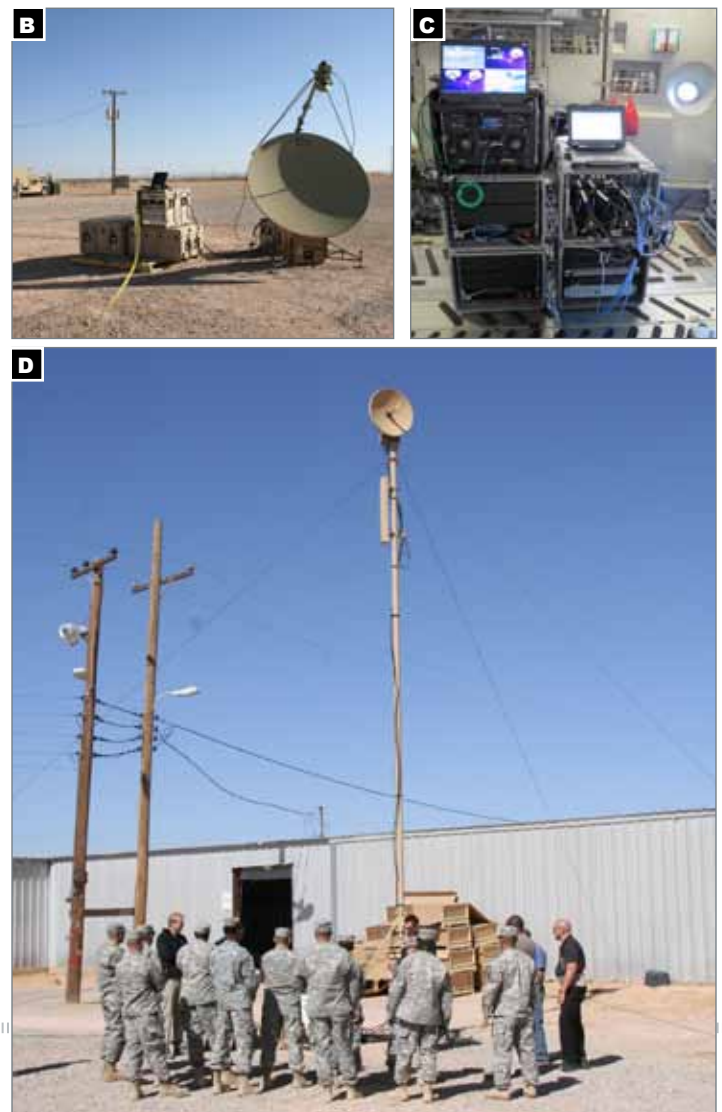
- Tri-band Line of Sight (TRILOS) is a new high bandwidth, WIN-T Increment 1 and Increment 2 interoperable network radio, which establishes a terrestrial link for a more robust network. It also reduces SWaP and significantly increases throughput.
- A transit-cased Troposcatter transmission (Tropo) system provides increased data throughput, reduced manning, and decreased SWaP. Tropo systems shoot microwaves that bounce off of the troposphere layer of the atmosphere instead of a satellite, allowing for secure, high-speed transfer of large volumes of data between sites and over terrestrial obstructions such as mountains. They

also reduce the Army's reliance on expensive commercial and military satellites.

- A new 4G LTE Cellular/Wireless transmission infrastructure capability will support Soldier cellular handheld requirements from the command post to the edge of the tactical formation.
- The Mission Network Enclave can be rapidly reconfigured to provide tactical access for one of four different networks: the coalition network, Secure Internet Protocol Router (SIPR), Non-secure Internet Protocol Router (NIPR), or commercial internet and phone service.
- An integrated radio-bridging and voice cross-banding module allows interconnection between telephones, combat net radios, first responders radios and voice applications supporting both civil and military operations. It enables seamless interoperability among disparate radio networks without supplying common radios to these users.
- Enroute Mission Command Capability (EMC2) will provide military internet access and mission command capability for Soldiers while in flight on US Air Force C-17s to support joint Global Response Force (GRF) missions. EMC2 enables rapidly deployed GRF units to plan and maintain critical situational awareness in the air, keeping joint forces connected as they travel into developing situations.



- A** | Soldiers from the 86th Expeditionary Signal Battalion, B Company evaluated the new command post 4G LTE/Wi-Fi system.
- B** | The Tropo Lite, a transit case-based tropospheric scatter communications system, enables secure transfer of large volumes of data between sites and over terrestrial obstructions.
- C** | The Key Leader Engagement Node(KEN) seen here on a C-17 aircraft is part of the EMC2 Program.
- D** | Soldiers get a first hand look at this new WIN-T Increment 1 line-of-sight radio that that reduces size, weight and power while significantly increasing throughput.



✱Non-Program of Record

# ACQ PHASE✱

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

3

4





# T2C2 MISSION

Transportable Tactical Command Communications (T2C2) is a new program of record that will provide robust voice and data communications in the early phases of joint operations.

By taking advantage of military satellite capability, it greatly increases throughput over currently fielded capability. T2C2 will connect small company and team-sized units on the ground to the high capacity Warfighter Information Network-Tactical (WIN-T) network and extend that network to the tactical edge.



- Janus Research
- Telecom Systems



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**

## DESCRIPTION

T2C2 provides satellite capability to small detachments and teams operating in remote locations without network infrastructure, enabling them to securely relay classified and time sensitive information, increasing the situational awareness for the entire operation. The man-portable T2C2 Lite version can be rapidly set up and provides satellite capability to small detachments and teams operating in remote locations without network infrastructure. The heavy version of T2C2 provides a high bandwidth tactical network extension for small companies and small forward operating bases operating beyond-line-of-sight from their higher headquarters.

## CAPABILITIES

- T2C2 Lite (V1) is intended to be man-portable (carried by one Soldier), sets up rapidly and can be on the air in less than ten minutes. V1 will support military Ka and X band and commercial Ku band capability for integration into the WIN-T tactical network.
- T2C2 Heavy (V2) will leverage capabilities based on the SIPR/ NIPR Access Point (SNAP) terminal solution and will support company sized elements and small forward operating bases. V2 will support military Ka and X bands and commercial Ku band for integration into the WIN-T tactical network.



- A** | T2C2 will provides soldiers operating in remote locations without network infrastructure
- B-D** | T2C2 design concept depiction for market research only



# ACQ PHASE

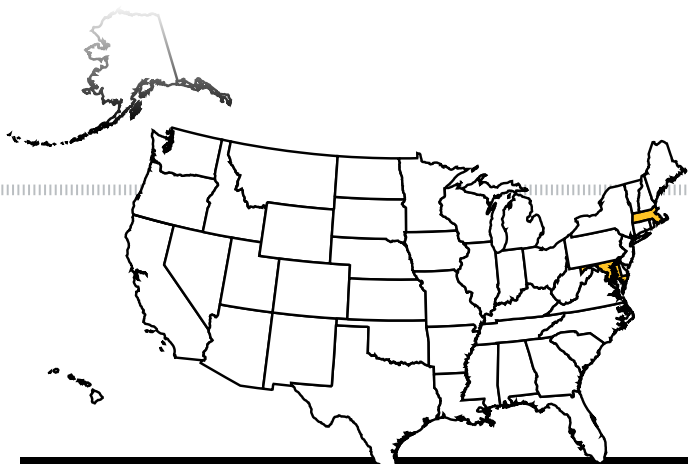
1. Technology Development
2. Engineering & Manufacturing Development
3. Production & Deployment
4. Operations & Support





# WIN-T INCREMENT 1 MISSION

Warfighter Information Network-Tactical (WIN-T) is the Army's current and future tactical communications network backbone that provides seamless, assured communications for the Soldier along with advanced network management tools to support implementation of a commander's intent and priorities. WIN-T Increment 1 establishes a network backbone that provides the full range of data, voice and video communications to battalion and above echelons using satellite communications nodes that set up at-the-quick-halt to successfully meet needed operational requirements.



- ESP
- General Dynamics
- JANUS Research



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

The Army began fielding WIN-T Increment 1, formerly known as the “Joint Network Node Network,” in 2004 and completed fielding in 2012. Similar to a home Internet connection, WIN-T Increment 1 provides a full range of at-the-halt data, voice and video communications, allowing Soldiers to simply pull over on the side of the road to communicate. WIN-T Increment 1 provides this networking capability to command posts and units at the battalion level and above. A follow-on enhanced networking upgrade, referred to as the “WIN-T Increment 1B upgrade,” is underway to improve the efficiency, security and interoperability of the network. The WIN-T Increment 1B upgrade provides the Colorless Core, which enhances network security and interoperability with future WIN-T Increments, and takes advantage of the Network Centric Waveform (a dynamic waveform that optimizes bandwidth and satellite utilization).

## CAPABILITIES

- WIN-T Increment 1 has three types of transportable network nodes that provide high-speed wide area network capability for secure voice, video and data exchange. The Tactical Hub Node (THN) supports division headquarters; the Joint Network Node (JNN) supports brigade level headquarters; and the Battalion Command Post Node (BnCPN) supports battalion level headquarters. The fourth type of node, the Regional Hub Node, is a fixed installation equivalent to three THNs, and is used to support theater level operations.
- The Satellite Transportable Terminal is highly transportable and mobile satellite system, which operates in conjunction with the JNN and BnCPN and is designed to establish secure voice, video and data communications anytime, anywhere.



**A** | Joint Network Node

**B** | A Soldier works with a WIN-T Increment 1 Satellite Transportable Terminal

**C** | Soldiers training at the WIN-T Increment 1 Colorless Core Upgrade, Regional Training Site 2 at Fort Drum, N.Y. in June 2013.



# ACQ PHASE

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

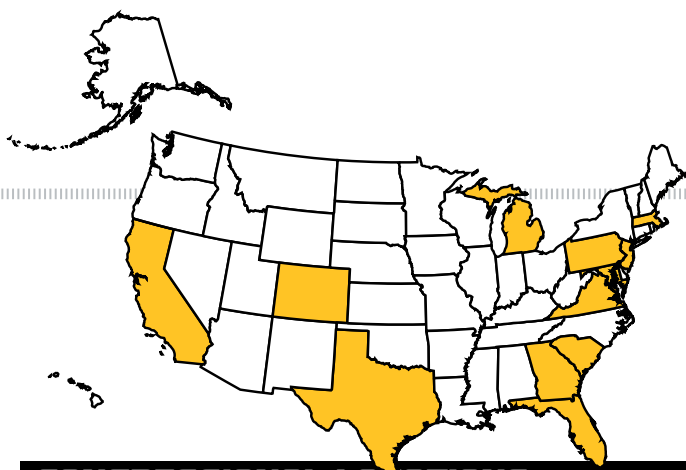
3

4



# WIN-T INCREMENT 2 MISSION

WIN-T Increment 2 provides an integrated tactical network leveraging proven commercial and government technology. It provides on-the-move capability and a mobile infrastructure by employing military and commercial satellite connectivity and line-of-sight (terrestrial) radios and antennas to achieve end-to-end connectivity and dynamic networking operations. WIN-T Increment 2 extends the network backbone to company level for maneuver brigades for the first time.



- General Dynamics
- Lockheed Martin
- L3 Communications
- Harris Corp



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**

## DESCRIPTION

WIN-T Increment 2 supports operations while on-the-move and pushes that integrated on-the-move capability down to the company level for the first time. It also introduces networking radios and enhances Network Operations (NetOps) for network planning and monitoring. Tactical Communication Nodes (TCNs) are the first step to providing a mobile infrastructure on the battlefield. When the TCNs are combined with the Points of Presence (PoP), Vehicle Wireless Packages (VWP) and Soldier Network Extensions (SNE), WIN-T Increment 2 enables mobile mission command from division to company in a mobile, ad-hoc, self-forming, self-healing network. WIN-T Increment 2 embeds communications equipment into select combat vehicles, giving WIN-T-equipped units the ability to maneuver on the battlefield and maintain connectivity to the network to ensure situational awareness and maintain command and control of forces. With WIN-T Increment 2, Soldiers can utilize applications for maneuver, fires and intelligence from inside vehicles, enabling commanders to make decisions on-the-move rather than being tied down to a fixed command post.

## CAPABILITIES

- TCN provides the principal backbone element and supports command post operations for

the WIN-T Increment 2 network. It provides communication and networking equipment and allows the Soldier to access the network at a variety of security levels. While at-the-halt, the TCN is equipped with a 10 meter, extendable mast to improve line-of-sight (LOS) connectivity and larger satellite assemblage for high throughput.

- PoP is installed on select platforms at division, brigade and battalion echelons, enabling mobile mission command by providing on-the-move network connectivity, both LOS and beyond-line-of-sight.
- SNE is installed on select vehicles at the company echelon to extend the network from the brigade down to the company level for the first time. Using its on-the-move satellite communication systems, the SNE is used to heal and extend lower echelon tactical radio network for geographically separated elements blocked by terrain features.
- VWP is a communications package for non-WIN-T Command and Control (C2) vehicles. The VWP B-Kit provides remote connectivity to a TCN via a Local Access Waveform for C2 vehicles during at-the-halt and on-the-move operations. It is a small form factor Local Area Network extension of the TCN's satellite and terrestrial LOS

network systems.

- NetOps and Security Center (NOSC) provides network management and enhanced tactical network planning, administration, monitoring and response capabilities.
- The Satellite Transportable Terminal Plus (STT+), a trailer-mounted ground satellite communications terminal with a generator, is used in conjunction with the TCN at the halt.

**A** | A WIN-T Increment 2 SNE was utilized during a developmental test in June 2014 at White Sands Missile Range, N.M.

**B** | A WIN-T Increment 2 PoP, which enables mobile mission command at the battalion level and above, heads out to the desert during a WIN-T Increment 2 developmental test.

**C** | The Developmental Test 2 provided the opportunity for technical verification of three WIN-T Increment 2 Stryker variants.



# ACQ PHASE

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support

1

2

3

4

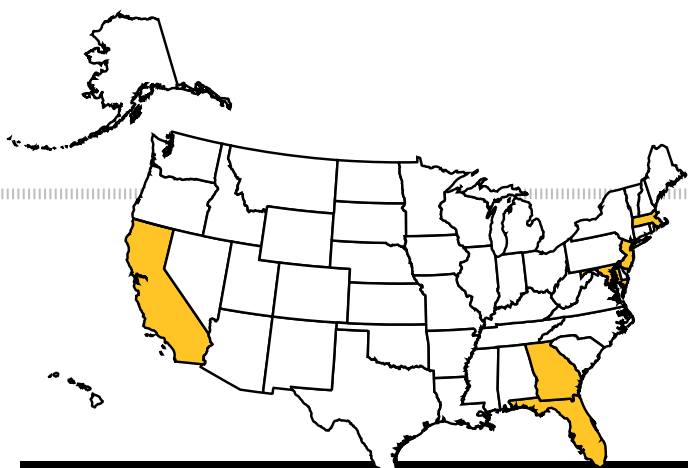




# WIN-T INCREMENT 3 MISSION

Warfighter Information Network-Tactical (WIN-T) Increment 3 develops the Network Operations (NetOps) software needed to meet the Army's Network Convergence goals.

NetOps provides the monitoring, control and planning tools to ensure management of the voice, data and internet transport networks. The WIN-T Increment 3 program's NetOps efforts will simplify and reduce the number of network management tools communication officers (G6s and S6s) use to manage the tactical communications network. WIN-T Increment 3 leads the Army's Tactical NetOps convergence efforts.



- Harris Corp
- General Dynamics
- Lockheed Martin
- L3 Communications



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**

## DESCRIPTION

WIN-T Increment 3 provides the fully integrated Network Operations capability to allow seamless integration of tactical network planning, management, monitoring and defense for the Signal Staff. These NetOps improvements simplify the management of the network, and increase the automation of tools and reporting. The effort will also increase visibility across the network to make communications systems easier to install, operate, maintain and defend – key to supporting an agile future force. NetOps will be provided as a technical insertion to WIN-T Increments 1 and 2 for fielding and support.

WIN-T Increment 3 also provides waveform management and modernization with the new Highband Networking Waveform (HNW) version 3.0 for line-of-sight communications, and the Net Centric Waveform (NCW) version 10.x for increased throughput capability for beyond-line-of-sight satellite communications.

## CAPABILITIES

- Providing enhanced NetOps software packages that support NetOps convergence activities across WIN-T and the Lower Tactical Internet to meet the Army's Convergence goals and Common Operating Environment (COE) interoperability.
- Advancements in monitoring, control and planning tools to ensure management of emerging voice, data and internet transport networks as well as improved Information Assurance and Network Centric Enterprise Services.
- Inherent software modernization through recurring technical refresh within the WIN-T family of programs.
- Improved beyond line-of-sight satellite communications via next generation Multi-Frequency Time Division Multiple Access (MF-TDMA) NCW supporting data rate increases for large terminals.
- Next generation line of sight Highband Networking Waveform version 3.0 available to other programs via the Joint Tactical Networking Information Repository.



**A** | The Condition Based Maintenance Plus (CBM+) interface to Command Post of the Future, known as the "CBM+ plug-in," was demonstrated during NIE 14.2. CBM+ is one of the NetOps solutions delivered by the WIN-T program.

**B** | Soldiers with 4th Brigade, 10th Mountain Division (4/10) at Fort Polk, La., receive training on Network Operations (NetOps) tools for tactical radios. As the Army restructures the WIN-T Increment 3 program to focus on NetOps, it will simplify and reduce the number of NetOps tools that G6s and S6s use to manage the tactical communications network.



# ACQ PHASE

1. Technology Development

2. Engineering & Manufacturing Development

3. Production & Deployment

4. Operations & Support



# MILTECH SOLUTIONS

## MISSION

MilTech Solutions supports the Department of Defense's initiatives with integrated, collaborative solutions to inspire actions across a synchronized workforce. MilTech Solutions develops, adapts and implements dynamic tools to optimize the human and technological potential of the Department of Defense.



- DSA
- IDS
- ManTech
- PKMM
- Symbolic Systems



**CONGRESSIONAL LOCATIONS**

**KEY CONTRACTORS**



## DESCRIPTION

The Military Technical (MilTech) Solutions Office serves as PEO C3T's Chief Information Officer/G-6 and Information Assurance Program Manager. MilTech Solutions is a Forward Operating Agency within PEO C3T that provides web-based information technology (IT) capabilities to ensure that support to the Warfighter is rapid, unified and productive.

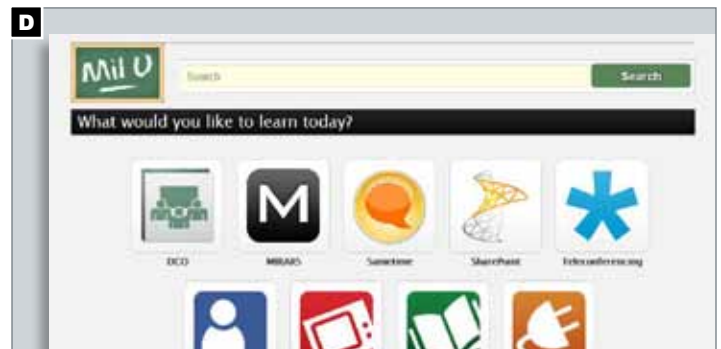
MilTech uses a customer-funded "consortium" approach in order to efficiently support the Army's C4ISR community and other Department of Defense (DoD) organizations. This model allows partnered organizations to pool resources and co-invest in technologies, reducing each member's individual costs. MilTech helps customers adopt IT and knowledge management solutions to address critical organizational challenges.

MilTech provides web-based technologies such as Microsoft SharePoint, the Single Interface to the Field (SIF) portal, milSuite and other collaborative tools and services. The SIF portal provides a single point of reach-back for Soldiers to obtain support for any system managed by the Army's C4ISR organizations. milSuite is a DoD-wide, secure suite of four collaboration tools that mirror existing social media platforms but are located behind the DoD online firewall.

## CAPABILITIES

- Program & Project Management: Project management, Project portfolio management, Contract & financial management, suspense/task management, risk & issue management
- Business Intelligence: Dashboards with interactive drill downs, Big Data/data warehousing, and Scorecards.
- Training & eLearning: Self-service learning solutions, Face to face instruction, Secure communities of practice.
- Field Support & Logistics: Fielding, logistics and sustainment management capabilities.
- Unified Communications: Collaboration enables problem resolution and information sharing: Web conferencing, Instant messaging/chat, Team sites and virtual white boarding.
- Personnel Management: Manpower management, Personnel accountability, and Emergency notification system
- Custom Development & Configuration: website, portal, and knowledge management development, hosting provider services, marketing, communication, and broadcast services, Help Desk, and Information Assurance.

- A** | milSuite has more than 450,000 registered users
- B** | milWire news service
- C** | milTech publishes a monthly report for CIOs
- D** | +30,400 users on milUniversity
- E** | PEO C3T SharePoint site



# ACRONYMS

<b>A</b>	Acquisition Decision Memorandum (ADM) Advanced EHF (AEHF) Advanced Field Artillery Tactical Data System (AFATDS) Advanced Tactical Optimized Map (ATOM) Airborne Maritime Fixed Station (AMF) Area Common User System Modernization (ACUS MOD) Air Operation Centers (AOCs) Area of Operation Responsibility (AOR) Areas, Structures, Capabilities, Organizations, People, and Events (ASCOPE) Army Battle Command System (ABCS) Army Data Distribution System (ADDS) Army Force Generation (AFORGEN) Army Key Management System (AKMS) Army Service Component Command (ASCC) Association of Public Safety Communication Officials (APCO) Asynchronous Transfer Mode (ATM) Automated Communications Engineering Software (ACES)	<b>D</b>	Defense Readiness Reporting System-Army (DRRS-A) Department of Defense (DoD) Deployable Ku Band Earth Terminals (DKET) Distributed Common Ground System - Army (DCGS-A)
<b>B</b>	Battle Command Common Services (BCCS) Battle Command Sustainment Support System (BCS3) Battlefield Video Teleconference (BVTC) Battalion Command Post Node (BnCPN) Beyond Line Of Sight (BLOS) Brigade Combat Team (BCT) Battlefield Coordination Detachment (BCD) Battle Damage Assessment (BDA) Beyond Line Of Sight (BLOS) Blue Force Tracker (BFT) Broadband Global Area Network (BGAN)	<b>E</b>	Early Infantry Brigade Combat Team (E-IBCT) Electronic Casualty Report (ECR) Electronic Key Management System (EKMS) Expeditionary Signal Battalion (ESB) Extremely High Frequency (EHF) Extended Data Rate (XDR)
<b>C</b>	Capabilities Development Document (CDD) Capability Production Document (CPD) Capability Set (CS) Coalition Joint Spectrum Management and Planning Tool (CJSMPT) Combat Net Radio (CNR) Combat Service Support (CSS) Combat Support (CS) Combatant Commands (COCOMs) Command and Control (C2) Command and Control Infrastructure Virtual Machine (C2IVM) Command Center System (CCS) Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Command Post Local Area Network (CP LAN) Command Post Communications System (CPCS) Command Post Computing Environment (CP CE) Command Post of the Future (CPOF) Command Post Platforms (CPPs) Commercial-Off-The-Shelf (COTS) Common Controller (CC) Common Hardware Systems (CHS) Common Operating Environment (COE) Common Operating Picture (COP) Common Software Program (CSP) Communications Security (COMSEC) Courses Of Actions (COAs)	<b>F</b>	Fire Direction Center (FDC) First Unit Equipped (FUE) Fiscal Year (FY) Follow-on Operational Test & Evaluation (FOT&E) Forward Entry Devices (FED) Force XXI Battle Command Brigade and Below (FBCB2) Forward Observer System (FOS)
		<b>G</b>	Global Broadcast Service (GBS) Global Command and Control System - Army (GCCS-A) Global Command and Control System – Joint (GCCS-J) Global Information Grid (GIG) Global Rapid Response Information Package (GRRIP) Ground Platform Communication System (GPCS) Government Purchase Rights (GPR) Gun Display Unit - Replacement (GDU-R)
		<b>H</b>	Hand Held (HH) Handheld, Manpack, and Small Form Fit (HMS) Handheld Radios (HHRs) Harbormaster Command and Control Centers (HCCC) Highband Networking Waveform (HNW) High Capacity Line Of Sight (HCLOS) High Frequency (HF) High Mobility Multi-Purpose Wheeled Vehicle (HMMWV)
		<b>I</b>	Independent Initial Operational Test & Evaluation (IOT&E) Information Assurance (IA) Initial Operational Capability (IOC) Information Systems Security Program (ISSP) Integrated Computer System (ICS) Integrated Waveform (IW) Intelligence Preparation of the Battlefield (IPB)
		<b>J</b>	Joint Automated Deep Operations Coordination System (JADOCS) Joint Battle Command-Platform (JBC-P) Joint Capabilities Release (JCR) Joint Command and Control Capability (JC2C) Joint Convergence/Multilateral Interoperability Programme (MIP) Joint Incident Site Communication Capability (JISCC) Joint, Interagency, Intergovernmental and Multinational (JIIM) Joint Network Node (JNN) Joint Urgent Operational Needs Statement (JUONS) Joint Platform Tablet (JPT) Joint Tactical Networking Center (JTNC) Joint Tactical Radio System (JTRS) JTRS Enterprise Network Manager (JENM)

<b>K</b>	Key Management Infrastructure (KMI) Kilowatt (kw)	Rifleman Radio (RR) Ruggedized Handheld Computer (RHC)
<b>L</b>	Lightweight Forward Entry Device (LFED) Lightweight Technical Fire Direction System (LWTFDS) Line Of Sight (LOS) Limited User's Test (LUT) Local Area Networks (LANs) Local COMSEC Management Software (LCMS) Logistics Common Operating Picture (LCOP) Low Rate Initial Production (LRIP) Low Volume Terminal 2 (LVT2)	<b>S</b>
<b>M</b>	Maneuver Control System (MCS) Manpack (MP) Maritime Operations Centers (MOCs) Materiel Development Decision (MDD) Mid-tier Networking Vehicular Radios (MNVR) Military Specification (MIL SPEC) Mission Command (MC) Mobile Ad Hoc Networking (MANET) Mobile User Objective System (MUOS) Mounted Computing Environment (MCE) Mounted Family of Computer Systems (MFoCS) Movement Tracking System (MTS) Multifunction Information Distribution System (MIDS) Multiservice Operational Test & Evaluation (MOT&E)	Satellite Communications (SATCOM) Satellite Transportable Terminal Plus (STT+) SATCOM-On-The-Move (SOTM) Secure Internet Protocol Router (SIPR) Secure Internet Protocol Router Network (SIPRNET) Secure, Mobile, Anti-Jam, Reliable, Tactical - Terminal (SMART-T) Signal Modernization (Sig Mod) Signal Operating Instruction (SOI) Single Channel Ground Airborne Radio System (SINCGARS) Single Interface to the Field (SIF) Simple Key Loader (SKL) SIPR/NIPR Access Points (SNAP) Situational Awareness (SA) Situation Awareness Data Link (SADL) Small Airborne Link 16 Terminal (SALT) Small Airborne Networking Radio (SANR) Software Communications Architecture (SCA) Software Development Kit (SDK) Soldier Network Extension (SNE) Soldier Radio Waveform (SRW) Size, Weight and Power (SWAP) Special Operations Command (SOCOM) Standard automated information systems (STAMIS) Standardized Integrated Command Post System (SICPS) Standardized Tactical Entry Points (STEP) Strategic Mission Command (SMC) Stryker Brigade Combat Team (SBCT) Super High Frequency (SHF) System Development and Demonstration (SDD) Systems of Systems Common Operating Environment (SOSCOE)
<b>N</b>	National Security Agency's (NSA) Net Centric Waveform (NCW) Network Operations (NetOps) North Atlantic Treaty Organization (NATO) Non Developmental Item (NDI)	<b>T</b>
<b>O</b>	On-The-Move (OTM) Over-the Air (Rekeying OTAR) Over-the-Horizon (OTH)	Tactical Communication Nodes (TCNs) Tactical Ground Reporting (TIGR) Tactical Hub Node (THN) Tactical Internet (TI) Tactical Operation Center (TOC) Tactical Mission Command (TMC) Transportable Tactical Command Communications (T2C2) Technical Assistance and Support Services (TASS) Trailer Mounted Support System (TMSS) Transportable Ground Receive Suites (TGRS) Troposcatter transmission (Tropo)
<b>P</b>	Personal Digital Assistants (PDAs) Pocket-Sized Forward Entry Device (PFED) Point of Presence (PoP) Post Production Software Support (PPSS) Production Readiness Review (PRR) Program Executive Office Command, Control and Communication-Tactical (PEO C3T) Project Manager Joint Tactical Networks (PM JTN) Project Director Network Enablers Project Manager Mission Command (PM MC) Project Manager Tactical Radios (PM TR) Project Manager Warfighter Information Network-Tactical (PM WIN-T) Program of Record (PoR)	<b>W</b>
<b>R</b>	Radio Based Combat ID (RBCI) Radio Based Situational Awareness (RBSA) Radio Frequency Identification Device (RFID) Range of Military Operations (ROMO) Rapid Aerostat Initial Deployment (RAID) Regional Support Centers (RSCs) Regional Hub Nodes (RHN)	Wideband Global SATCOM (WGS) Wideband Networking Waveform (WNW) Warfighter Information Network-Tactical (WIN-T)
		<b>U</b>
		Ultra High Frequency (UHF) Unmanned Aerial Vehicles (UAVs)
		<b>V</b>
		Vehicular Adaptor Amplifier (VAA) Vehicle Integration for C4ISR/EW Interoperability (VICTORY) Vehicle Wireless Package (VWP) Very Small Aperture Terminal (VSAT) Voice over Internet Protocol (VoIP)





# FOR MORE INFORMATION

PUBLIC SITE: [HTTP://PEOC3T.ARMY.MIL](http://PEOC3T.ARMY.MIL)

FACEBOOK: [HTTP://WWW.FACEBOOK.COM/PEOC3T](http://WWW.FACEBOOK.COM/PEOC3T)

TWITTER: [HTTP://TWITTER.COM/PEOC3T](http://TWITTER.COM/PEOC3T)



PROGRAM EXECUTIVE OFFICE COMMAND CONTROL COMMUNICATIONS-TACTICAL

Approved for public release; distribution is unlimited.



1 OCT 2014